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CLIMATIC ATLAS

OF THE OUTER CONTINENTAL SHELF WATERS AND COASTAL REGIONS OF ALASKA

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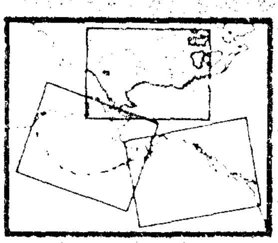
II-BEAUFORT SEA



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A206525

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER

2. GOVT ACCESSION NO.

3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle)
CLIMATIC ATLAS OF THE OUTER CONTINENTAL SHELF WATERS AND COASTAL REGIONS OF ALASKA
VOL III CHUKCHI-BEAUFORT SEA

5. TYPE OF REPORT & PERIOD COVERED
REFERENCE REPORT

6. PERFORMING ORG. REPORT NUMBER
NAVAIR 50-1C-553

7. AUTHOR(s)

8. CONTRACT OR GRANT NUMBER(s)

9. PERFORMING ORGANIZATION NAME AND ADDRESS
Naval Oceanography Command Detachment
Federal Building
Asheville, NC 28801-2696

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS

11. CONTROLLING OFFICE NAME AND ADDRESS
Commanding Officer
Fleet Numerical Oceanography Center
Monterey, CA 93943-5005

12. REPORT DATE
1988

13. NUMBER OF PAGES

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)

15. SECURITY CLASS. (of this report)
unclassified

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)
Marine climatology, isopleths, cumulative percentage frequency distributions, surface winds, visibility, cloudiness, precipitation, surface air temperature, surface pressure, relative humidity, persistance, inversion, tropopause, and refractive index gradient.

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
This climatic study consists of monthly charts and tables of (1) clouds, (2) precipitation, (3) visibility-tables, (4) ceiling-visibility (mid-range/low range), (5) wind-visibility-cloudiness, (6) scalar mean wind speed, (7) wind speed less than 11 and greater or equal to 34 knots, (8) wind speed 11-21 and 22-33 knots, (9) surface wind roses, (10) air and sea temperature, (11) wave height-isopleths, (12) wave height-tables, (13) surface currents (seasonal).

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-LF-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

U.S. DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
ALASKA OUTER CONTINENTAL REGION
OCS STUDY, MMS 87-0013

U.S. DEPARTMENT OF DEFENSE
NAVAL OCEANOGRAPHY COMMAND DETACHMENT
ASHEVILLE, N.C.
NAVY S/N 0850-LP-014-7000

U.S. DEPARTMENT OF COMMERCE
NOAA, NATIONAL OCEAN SERVICE
OFFICE OF OCEANOGRAPHY AND MARINE ASSESSMENTS
OCEAN ASSESSMENT DIVISION, *ALASKA OFFICE*

CLIMATIC ATLAS

OF THE OUTER CONTINENTAL SHELF WATERS AND COASTAL REGIONS OF ALASKA

VOLUME III
CHUKCHI - BEAUFORT SEA

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1988

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Section II: Marine and Coastal Climatic Atlas — Page Index

Acknowledgments

The maps, graphs, and tables in the second section are the result of efforts by many people at NOAA's National Climatic Data Center (NCDC) in Asheville, North Carolina. Special acknowledgment is *given* to the following named meteorologists of NCDC's Climatological Analysis Division: Phala L. Franks, for performing the voluminous computer processing and editing of data; Michael J. Changery and Joe D. Elms, for their editorial evaluation of the isopleth analyses and graphics products; Richard W. Knight, for production of the cyclone track and sea ice statistics; Thomas R. Karl, for production of the wind and wave persistence statistics; and M. Lawrence Nicodemus, for production of the annual maximum wind and wave statistics. Appreciation is also extended to NCDC's meteorological technicians Charles W. Thomason, Jr. (for assisting in the isopleth analyses), and Elaine H. Mason (for assisting in the edit of the film graphics); and to NCDC's print shop technicians Claude A. Cochran and Berry K. Coleman for filming the numerous graphics and analyses maps.

The observations processed for most of the U.S. coastal stations were collected by the National Weather Service (NOAA), the Federal Aviation Administration, and the U.S. Navy, and routinely sent to NCDC for digitizing and archiving. The digital data for the U.S. Air Force (USAF) and Russian stations were provided by the USAF's Environmental Technical Applications Center in Asheville. The digital data for the Canadian coastal stations were purchased from the Canadian Climate Centre in Downsview, Ontario. Data summaries were made possible through programs designed at NCDC and funded primarily by the Commander, U.S. Naval Oceanography Command, in support of U.S. Navy's continuing marine climatology requirements, and by Department of Interior's *Minerals Management Service in support of this* atlas production.

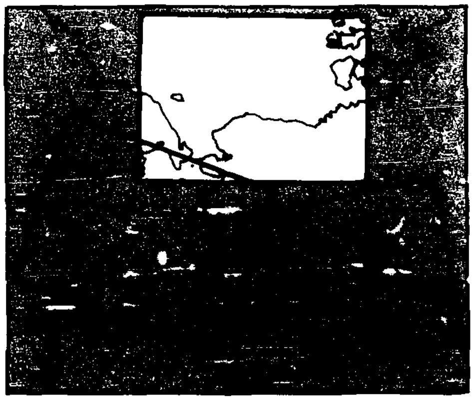
The extremes data in the first section were updated through 1984 from a published *Alaska Climate Summaries* done by AEIDC in another project, published Canadian normals 1951-1980, and data supplied by Drs. Howard Critchfield and Kelly Redman, state climatologists for Washington and Oregon. Joseph C. LaBelle, glaciologist and geomorphologist at AEIDC assisted in the preparation of Cook Inlet ice and calving glacier ice in Volume I. Thanks also to Denise Cote for editing section I of all volumes and Laura J. Larson who was graphics project leader for the atlas and scheduled work on maps, charts, and text for all 3 volumes.

This revision was funded (under AEIDC contract #NE-EF3100-7-00240 with NOAA) in part by the Minerals Management Service, Department of the Interior, through an interagency agreement with the National Oceanic and Atmospheric Administration, Department of Commerce, as part of the Alaska Outer Continental Shelf Environmental Assessmant Program. Additional funding was provided by the Naval Oceanographic Command Detachment, Asheville, North Carolina.

Abstract

This project updates the knowledge of climatological conditions presented in the 1977 publication of this three-volume atlas. Such environmental information for the three Alaskan marine and near-coastal areas is important for resource development of the outer continental shelf—The Gulf of Alaska (Volume I), the Bering Sea (Volume II), and The Chukchi and Beaufort Seas (Volume III) as shown on the map below.

The maps, graphs, and tables in the atlas present a detailed climatic profile of the marine and coastal regions of Alaska. Statistics give the means, extremes, and percent frequency of occurrence of threshold values for these elements: wind, visibility, present weather, sea level pressure, air and sea surface temperature, clouds, waves, and such supplemental information as storm surges, tides, sea ice, cyclone tracks, surface currents, bathymetry, detailed weather, and aviation weather. Data came from



4.5 million surface marine observations and 8.5 million observations for 66 coastal and island stations within the area 40°-84°N and 110°W-160°E, and provide the best possible climatological picture of the outer continental shelf waters and coastal regions of Alaska.

Introduction

The nature of man's offshore activities depends to a large extent on weather conditions. Knowledge of these conditions can help insure efficient and safe operations. Extreme weather conditions that may be encountered in a given location largely determine the design, construction, and operation of permanent platforms and structures in the ocean as well as onshore support activities. This atlas is useful to those engaged in shipping, national defense, fishing, and applied research where a knowledge of coastal and offshore climate is essential. Weather information also aids in assessing the onshore impact of offshore activities.

This atlas is the result of a joint effort by the Arctic Environmental Information and Data Center (AEIDC), University of Alaska and the National Climatic Data Center/National Oceanic Atmospheric Administration (NCDC/NOAA) to present descriptive climatology and data analyses of surface marine and atmospheric parameters for those waters and coastal regions of the Alaskan outer continental shelf important to resource development. It is designed to serve as a climatological reference in the assessment of potential impact by oil and gas exploration and development and of leasing and operating regulations and monitoring programs that will permit resource development and insure environmental protection.

The evaluation is in the form of a climatic atlas for each of three marine and coastal areas: The Gulf of Alaska (Volume I), The Bering Sea (Volume II), and The Chukchi and Beaufort Seas (Volume III).

The first section in each volume contains information on such hazards as storm surges, superstructure icing, hypothermia, and wind chill; extremes data on winds, temperature, and precipitation; and planning information on surface currents, bathymetry, sea ice, and tides. The second section presents a detailed climatic profile in the form of isopleth analyses, graphs, and tables.

Section I:
Selected Topics in Marine and Coastal Climatology

by James L. Wise and Lynn D. Leslie

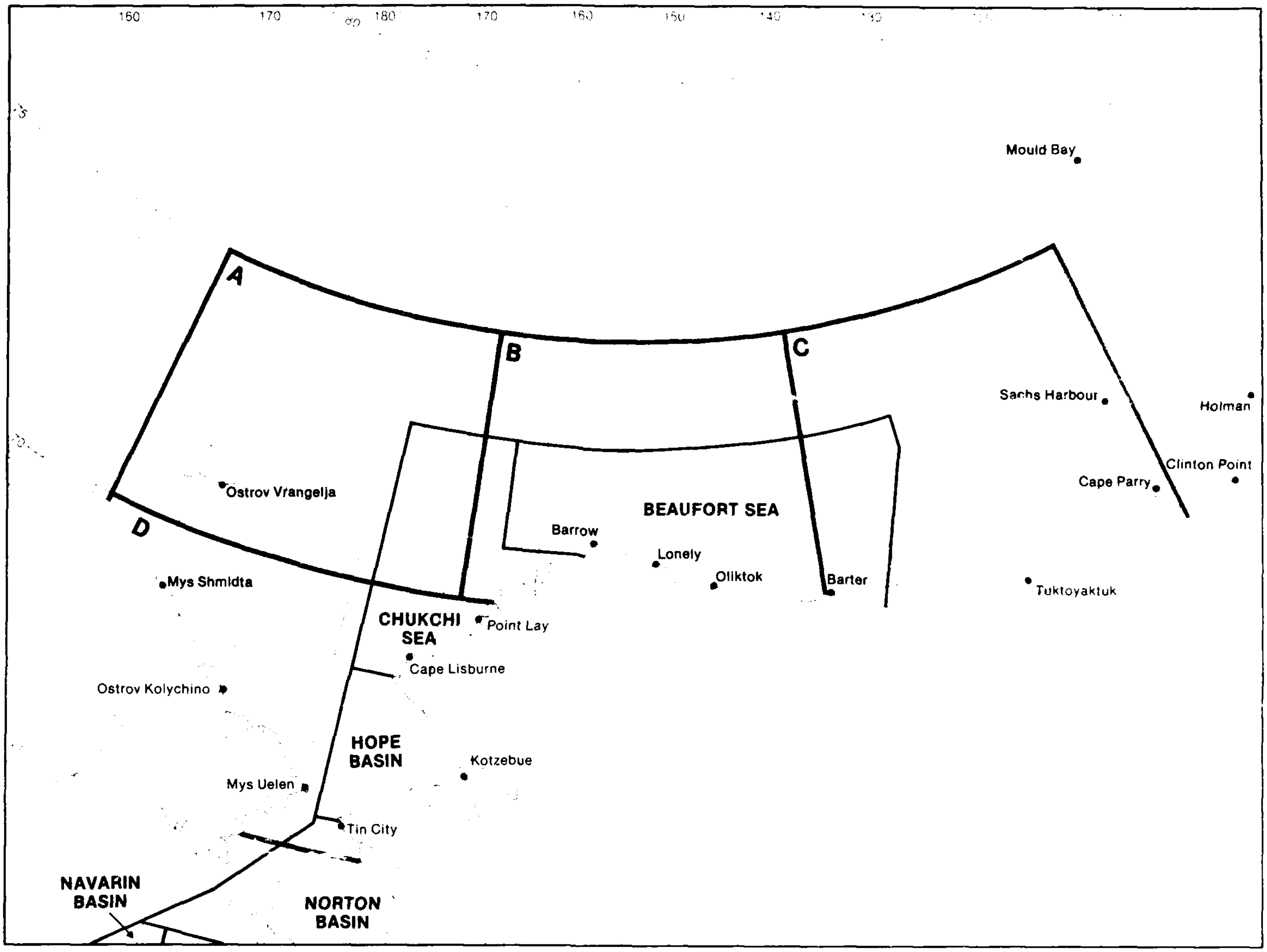


Figure 1. MMS Lease Sale Areas

Figure 2. Place Names Map

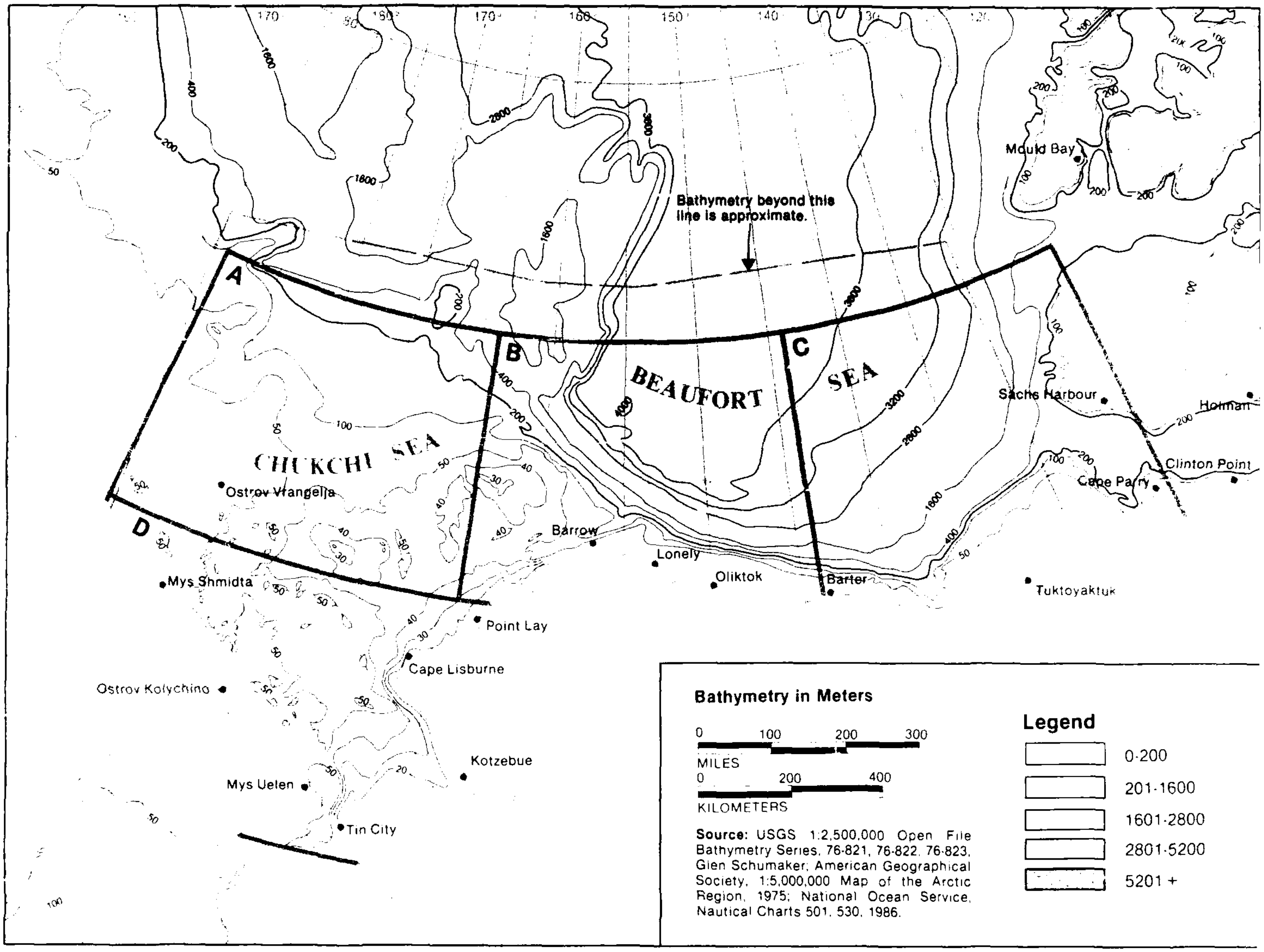


Figure 3. Bathymetry

Currents of the Chukchi and Beaufort

Chukchi Sea

A warm current enters the Chukchi Sea via Bering Strait and flows around Pt. Barrow to approximately 148°-152° W in the Beaufort Sea. Average rate of flow through the strait is $1.6 \times 10^6 m^3/s$. In the Chukchi, this current concentrates near the surface and overlies dense, relict bottom water trapped by the shallow depths. It has a fairly uniform velocity which averages 45 cm/s in the summer and 10 cm/s in winter (Arctic Institute of North America 1974). This flow has many meanders and eddies and is slowed somewhat by dominant northeasterly winds. This semipermanent flow is the dominant barotropic feature. To the east, in deeper waters, the warm water mass descends to mid-depths. Maximum temperatures are observed in 30- to 50-m depths.

Data from mid-depths indicate a north-flowing current parallel to the shore, and to a marked degree, the bottom contours, with rapid shifts to the south (Rouse and Wiseman 1980). The along-shore component attains speeds as high as 70 cm/s but is typically on the order of 40 cm/s. The current, comprised of Alaskan Coastal Water and Bering Sea Water, hugs the east side of the Chukchi Sea. In the region of Cape Prince of Wales warm water is present farther to the northeast. The degree of penetration into Kotzebue Sound varies from year to year. Some of the water in Kotzebue Sound is believed to move southwest along the north shore of the Seward Peninsula approximately as far as Shishmaref before joining the general northward flow (Coachman, Aagaard, and Tripp 1975). Near Point Hope and off Cape Lisburne the flow bifurcates. One branch turns north-northwest toward Herald Shoal, the other closely follows the Alaskan shore. Along the coast, data indicate that the current is quite narrow, approximately 37 km in places (Bourke and Paquette 1974).

Approximately 100 km offshore a warm current originating in the Bering Strait flows north-eastward (Coachman et al. 1975). Farther north the current approaches the coast and flows through Barrow Canyon into the Beaufort Sea. Large-scale fluctuations in atmospheric pressure appear to influence the temporal variations in the transport (Mountain 1976).

There is a large anticyclonic eddy between the coast and the warm current (Ingham and Rutland 1972). Within this eddy and the warm current, both surface and deep currents are strongly influenced by wind stress. Velocities lie along the same octant and are similar in magnitude. This implies a strong barotropic component in the flow (Ingham and Rutland 1972).

Nearshore current patterns and velocities are very complicated and variable because of coastal configuration, bathymetry, and winds. During southwesterly winds, warm surface waters pile up against the coast. Warm waters are displaced offshore and cooler water upwells along the coast during northeasterly winds. A baroclinic coastal jet may be present. Evidence supporting this current consists of alternation of near-surface current direction and simultaneous coastal setup and setdown, caused by Ekman divergence, in response to changing winds. This results in the transport of warm, low salinity, nearshore water and interaction with the Kasegaluk Lagoon waters. The coastal water mass properties are thus modified. Data suggests that due to strong winds, shallow bathymetry, large coriolis, and strong stratification, the baroclinic coastal jet probably dominates the coast from Cape Lisburne to Icy Cape during the summer months (Rouse and Wiseman 1980).

Nearshore lagoon water mixes with river runoff and with the coastal waters forced in by storms. Thus coastal water is freshened as well as warmed by solar radiation. Water within the lagoon becomes well mixed due to wind changes which weaken the vertical stratification.

Water movement from the Bering Strait to Cape Lisburne takes 10-15 days in the summer (Arctic Institute of North America 1974). Other known velocities are listed for the Alaskan Coastal Water. It moves north at 50-200 cm/s on the east coast in the Bering Strait (AEIDC 1975; Arctic Institute of North America 1974; Henkins and Kaplin 1966); 0-50 cm/s on the Siberian side (AEIDC 1975); 25 cm/s near Diomede Island (Arctic Institute of North America 1974); 50 cm/s near Cape Thompson (Arctic Institute of North America 1974); 15-25 cm/s for currents parallel to the coast, at the surface, (0-10 m) in the summer (Coachman et al. 1976); and approximately 30 cm/s near Icy Cape (Coachman et al. 1976).

Tidal currents are rotary and very weak in the Chukchi. They vary from .3 to .9 cm/s depending on the location and tidal stage. Nearshore the tidal currents appear to be small, on the order of 1 cm/s (Wiseman et al. 1974). Kotzebue Sound currents are mostly tide- and wind-induced. Velocities through and within the sound are very slow, averaging less than 0.1 cm/s.

Beaufort Sea

The large-scale clockwise Beaufort Gyre moves waters from the Canadian Basin westward in the deeper offshore regions. Gyre velocities reach 5-10 cm/s north of the Alaskan coast (Aagaard 1975). Another dominant circulation feature is the Alaskan Coastal Current, which enters the Beaufort Sea through the Barrow Sea Canyon. The jet then follows the 200-m isobath to approximately 152° W (Aagaard 1983; Thomas 1983). Velocities are usually on the order of 15-25 cm/s to the east, but the jet frequently reverses in direction, resulting in a lower net eastward movement of about 7 cm/s.

Surface waters in the Beaufort Sea are primarily wind driven. Flow is variable and responsive to meteorological forcing, with periods on the order of three to ten days. Wind forcing may decouple the upper layer from the subsurface flow to produce a reversed flow direction. Seaward of about the 50-m isobath the mean subsurface circulation pattern is predominantly eastward both summer and winter (Aagaard 1984).

This eastward flow, on the order of 10 cm/s, characterized by a temperature maximum, is called the Beaufort Undercurrent. Two water masses comprise the undercurrent flow—Alaskan Coastal Water, characterized by 5°-10°C temperatures and salinities of about 31%, and Bering Sea Water, which has a similar temperature maximum and typically has higher salinities. Temperature gradients associated with the Beaufort Undercurrent do not manifest as a frontal zone in the summer. In winter the temperature maximum disappears and the gradient is negligible.

The undercurrent originates in the Bering Sea and has been observed seaward of the 50-m isobath. This water has been observed as far east as 148°W, where it probably mixes with local surface water and becomes indistinguishable. Bering Sea Water can be traced as far east as Barter Island, at 143°W (Aagaard 1984; Lissauer et al. 1984).

The inner boundary of the flow follows the 40- to 50-m isobath and identifies the demarcation of the inner and outer shelves. The northern edge of the current is less clearly defined due to mixing with local water. The current is known to strengthen seaward of the 100-m isobath and to the east. Aagaard (1984) speculated that other water masses besides those originating in the Bering Sea contribute to the volume and strength of the flow.

The undercurrent extends from near surface to the bottom between the 50- and 2500-m isobaths, producing a band about 60-70 km wide. It may be the nearshore manifestation of a major boundary current which is part of the large-scale circulation within the Canadian Basin. The mechanism which drives the current is not clear, though it is probably not locally driven. Neither wind-driven, geostrophic flow, nor momentum flux upstream, maintained by inertial and momentum balance, are supported observationally. The momentum flux in the western basin from the Chukchi Sea through Barrow Canyon is probably important. One possible explanation for this mean eastward flow arises from differences in sea level between the Atlantic and Pacific (Aagaard 1981).

Nearshore currents tend to follow local wind patterns and bathymetry. In the western Beaufort prevailing winds are from the east-northeast during all seasons. The winds are more bimodal in the eastern Beaufort. During easterly wind events in both the eastern and western regions, transverse circulation would be predominantly offshore in the upper layer. During westerly wind events the flow pattern would be onshore in the upper layer and offshore at depth. Since the wind pattern varies with season, the resultant inner shelf, surface current pattern would be to the east in winter, with an onshore component, and to the west in summer, with an offshore component. There does appear to be a net shoreward movement; at least within 10 km of the barrier islands (Matthews 1981).

The longshore transport of the inner Beaufort Shelf follows the bathymetry at approximately 15-25 cm/s (3% of the wind speed). In the western Beaufort the mean nearshore current is to the west. Occasional reversals will occur due to the passage of storm systems. In the eastern Beaufort the mean nearshore flow is to the west in the summer. Frequent reversals to the east in the fall and early winter are associated with storm systems which produce a high setup and transport (Barnes and Reimnitz 1974; Barnes et al. 1977; Drake 1977). Lissauer et al. (1984) provides mapped nearshore, wind-driven current estimates for regional stretches of the Beaufort Sea coast for varying wind directions and magnitudes.

Since land-fast sea ice is present out to approximately 25 km all but three months of the year, it is difficult to track the movement of surface waters except during the open water season. There seems to be little net motion of nearshore bottom currents under ice (Aagaard 1984). Generally the speeds are estimated to be less than 5 cm/s, or approximately 20% of the surface speed (Matthews 1981). The current direction is probably variable, but seems to be roughly wind driven, with dampened speeds and response times under the ice. These under-ice, winter currents are probably responses to coastal wind setup or, possibly, direct responses to atmospheric pressure gradients (Aagaard 1984). Thus, although energy and magnitude are dampened under ice, there appears to be a wind-driven component in the Beaufort nearshore current, year-round, which extends to the coast or to local barrier islands. A thermohaline vector component may be present nearshore, driven by the buoyancy gradient from freshwater runoff in early summer and possibly a density-driven circulation associated with brine drainage in winter.

Considerable research has been accomplished in the central and eastern Beaufort in nearshore and lagoon regions (Hachmeister and Vinelli 1983; Matthews 1979). Observed currents in the lagoons and near shore appear to be predominantly wind driven, with current speeds approximately 3-4% of the wind speed. Superimposed on these mean, wind-driven currents are short-term effects of storm passages, and tidal effects dominated by diurnal (M_2) forcing. Circulation patterns and exchange properties of nearshore and lagoon/barrier island systems on the eastern and western Beaufort Shelf show many dissimilarities. Observed differences may be attributable to differences in both coastal and lagoon geometries and their surrounding physical environments.

Three basic lagoon types appear on the Beaufort coastline. The first type is the open lagoon, i.e., those which are open to longshore transport as well as to cross-shelf exchange between multiple large openings in the barrier islands. The second lagoon type is the pulsing lagoon. The pulsing lagoon is closed to longshore current throughout; exchange with the nearshore waters occurs primarily via tidal pumping of water through the single major entrance in the barrier islands, with less exchange occurring through other shallow breaks. The third lagoon type is termed a limited exchange lagoon because it has only limited longshore current throughout, via several larger openings in the barrier island system. These lagoons may or may not exhibit pulsing effects due to tidal pumping. One or more small rivers or streams typically empty into each type of lagoon, providing a source of fresh water in early spring. Each lagoon type is discussed in detail in Lissauer et al. (1984), using specific geographic examples.

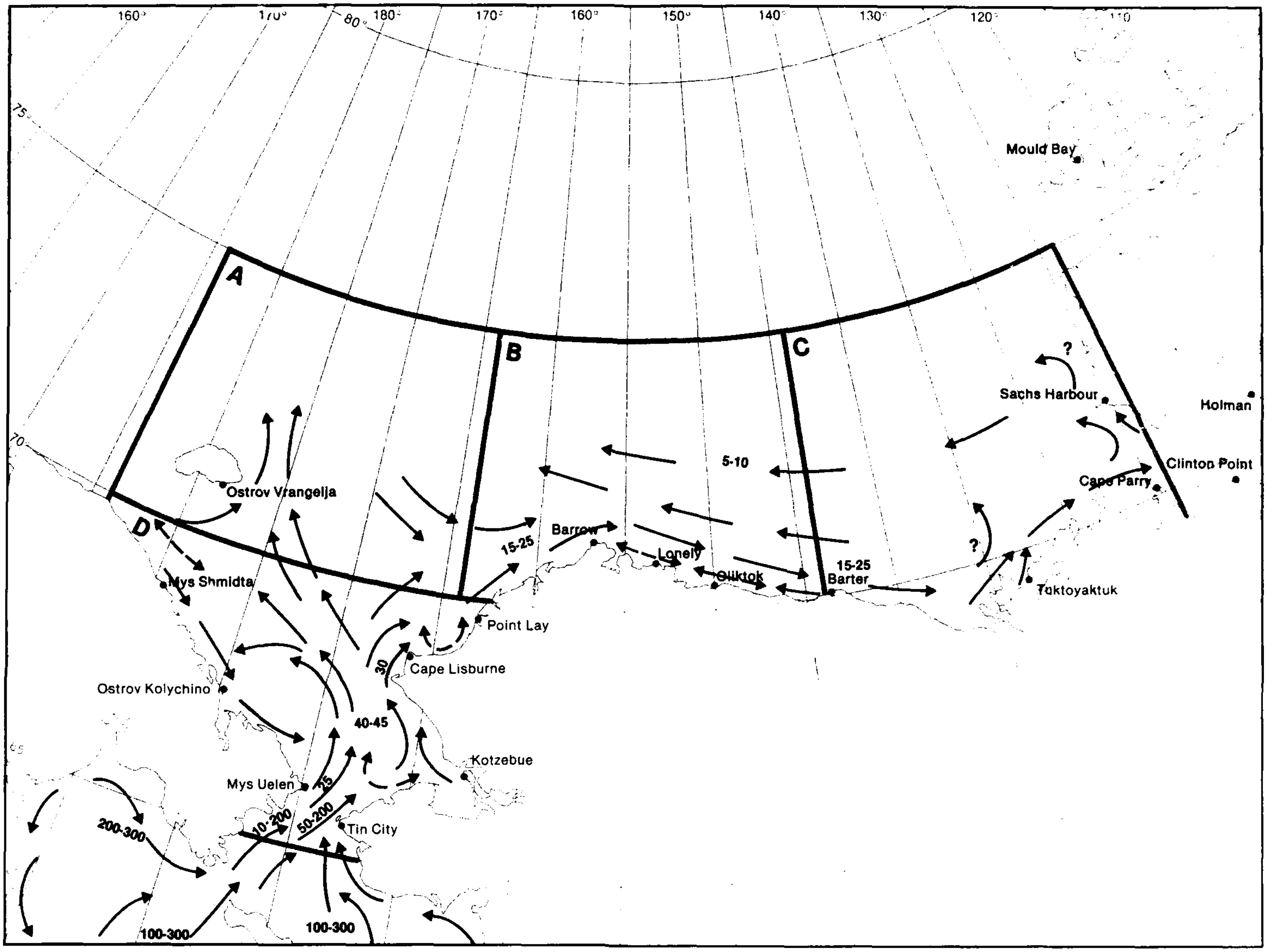


Figure 4. Sea Surface Currents—Summer

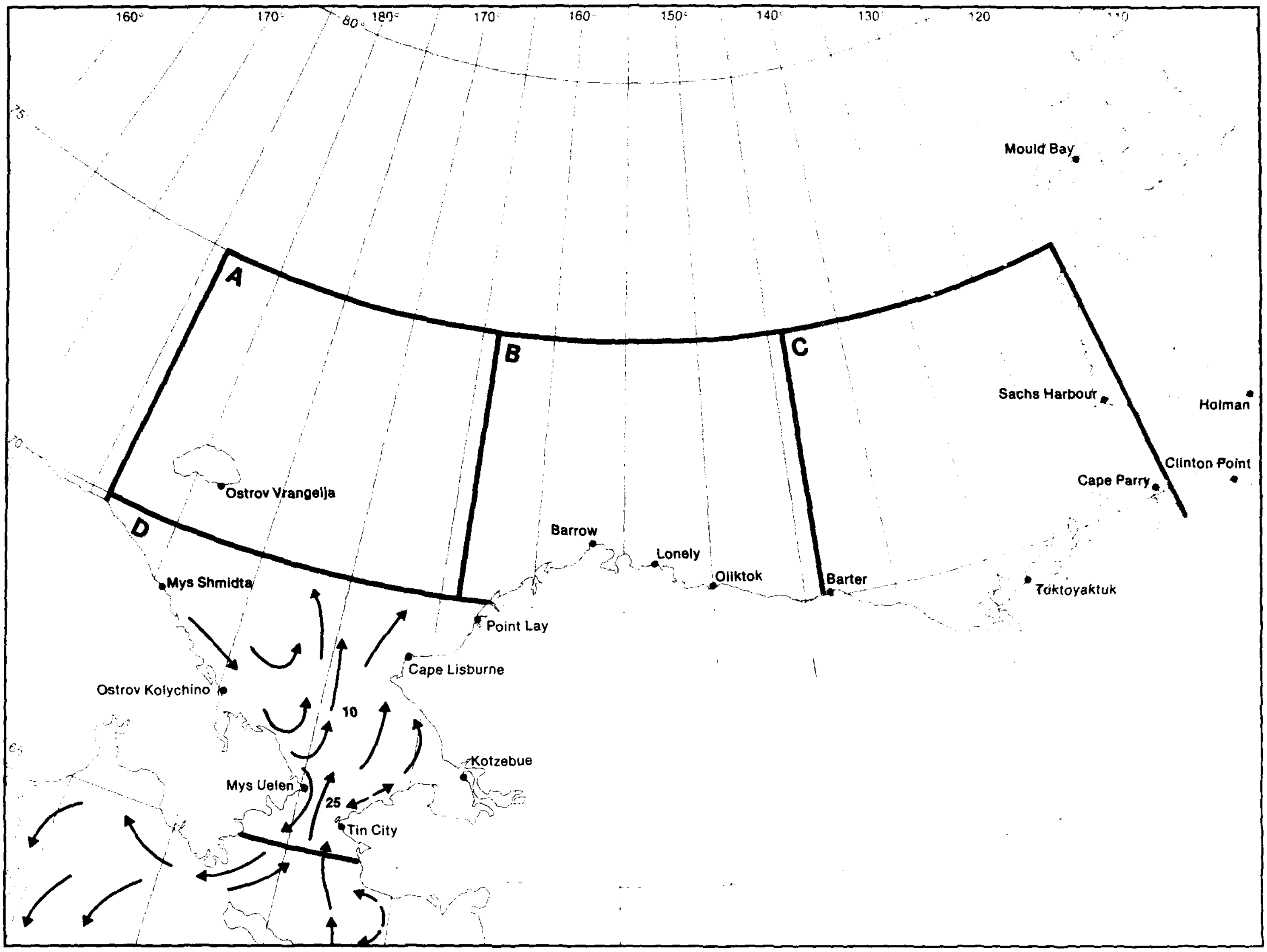
Legend

Beaufort and Chukchi Sea surface currents. Numbers indicate mean speed in cm/s. Arrows depict flow as follows:

← Prevailing current direction

←-- Variable current direction

Chukchi and Beaufort surface currents synthesized from Coachman, Aagaard and Tripp, 1975; Drury et al. 1981; Lissaver et al. 1984; and O'Rourke, 1974.



Legend

Beaufort and Chukchi Sea surface currents. Numbers indicate mean speed in cm/s. Arrows depict flow as follows:

← Prevailing current direction

←-- Variable current direction

Chukchi and Beaufort surface currents synthesized from Coachman, Aagaard and Tripp, 1975; Drury et al. 1981; Lissaver et al. 1984; and O'Rourke, 1974.

Figure 5. Sea Surface Currents—Winter

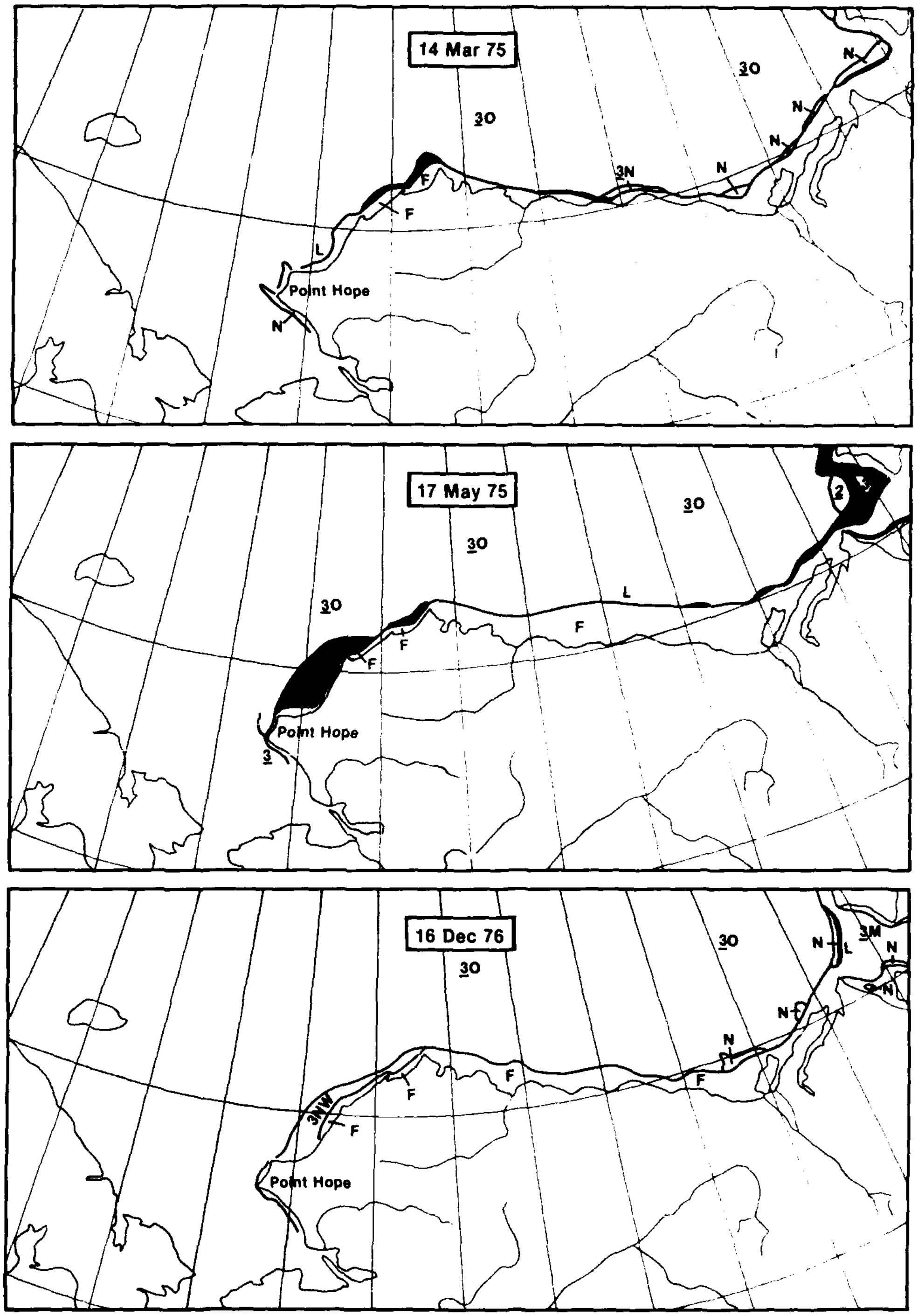
Sea Ice

Introduction

The annual cycle of formation and dissipation of sea ice in Alaska waters has widespread effects on a number of phenomena. When the ice forms, the coastal climate changes in character from maritime to continental with much colder temperatures and lower humidities than would be the case if open waters were present. The ice also interferes with and even stops water transportation with the possible exception of icebreakers and other specially designed ships. It makes the cleanup of oil spills difficult, if not impossible, by hampering cleanup operations and by trapping oil under the ice. Sea ice also has important effects on the cycles of living creatures in and near the sea.

The Chukchi sea remains virtually ice-covered from the beginning of December into mid-May, with the exception of a relatively wide shore lead that may develop seaward of the shorefast ice along the northwest coast (Figure 6). This feature is particularly prevalent from Point Lay to Point Barrow during periods of strong easterly winds. Around mid-May the seasonal disintegration of the ice cover begins as shorefast ice and thin ice decay and loosen along the northwest coast and in the interior of Kotzebue Sound (Webster 1982; see map sets 17 and 18 in section II). It is not until the beginning of July that there is a significant reduction in the probability of ice cover in the southern Chukchi Sea. Ice generally stays close in to the coast at Point Barrow into late July and early August. Figure 7 shows the dates that the navigation season around Point Barrow to Prudhoe Bay is open. The length of the navigation season varies

Figure 6. Recurring Leads and Polynyas



Legend

Large black areas indicate open water to 1/10 ice cover.

Thin line leading into thicker line indicates a crack/lead.

Single line indicates division between ice cover categories.

L — Indicates an open lead and is inserted in some case where lead is not obvious.

F Fast ice	1 2/10-5/10 ice cover
N New Ice	2 6/10-7/10 ice cover
O Old Ice	2+ 8/10 ice cover
M Multi-year ice	3 9/10-10/10 ice cover
W Grey-white ice	

Source: Stirling and Cleator 1981.

from not open at all in 1975 to 99+ days in 1958. The median date for the initial opening of the route to Prudhoe Bay is August 2 and dates of openings varied from July 19 in three years to September 13 in 1955 (U.S. Navy 1986).

Recurring Leads and Polynyas

Wind and current stresses on the ice can cause tension or divergence and open relatively narrow, long stretches of open water in an otherwise dense ice cover. In the absence of strong currents the wind induces leads which run perpendicular to the wind direction. Flaw leads generally occur just seaward of the stable fast ice zone when strong offshore winds develop. The most notable flaw lead event along the Chukchi Sea coast of Alaska is the series of leads which opens each spring and allows whales to reach the Beaufort Sea. Leads open in response to easterly winds that usually occur in March or April.

An area of open water or thin ice is a common occurrence in the Point Hope vicinity (Carleton 1980) but the areal extent varies considerably from year to year. (Figure 8) This area is not necessarily a true polynya. In the early spring, any open water is often refrozen by the cold offshore winds which cause polynya formation. Furthermore, the opening can be very quickly closed by a reversal in the wind field. Therefore, although this area commonly experiences open water or light ice conditions, these circumstances cannot be anticipated with any degree of certainty (AEIDC 1983).

Fast Ice Boundary

Charts showing the fast ice boundary come entirely from the recent work of Stringer, Barrett, and Schreurs (1980), performed for the National Oceanic and Atmospheric Administration, Outer Continental Shelf Environmental Assessment Program (OCSEAP). The objective of this project was to develop a description of nearshore ice along the Bering, Chukchi, and Beaufort coasts and to identify those features that may be a hazard to oil and gas development. LANDSAT imagery was used to develop regional maps for each year of the study. These yearly regional maps were used to determine average or typical conditions that were then recorded on seasonal maps. Information displayed on the seasonal maps was developed from winter and spring observations for the years 1973 through 1977.

Selected Sea Ice Data and Severity Index for the North Coast of Alaska 1953-1985

	SEVERITY RANK	YEAR	1 nmi	2 nmi	3 nmi	4 nmi	5 DATE	6 DATE	7 #DAYS	8 #DAYS
Mildest	1	1958	50	150	50	210	07/19	10/25	92	99+
	2	1968	25	165	30	200	07/19	10/18	86	91
	3	1954	20	115	20	210	08/01	09/30	38+	61+
	4	1973	5	80	5	190	07/31	10/20	73	82
	5	1962	25	150	30	150	07/19	09/30	49+	68+
	6	1963	5	130	5	130	08/13	10/18	67	67
	7	1961	15	105	15	135	07/25	09/24	49+	62+
Years are	8	1979	0	125	0	125	08/04	10/08	31	56
listed in order of	9	1974	10	100	10	100	08/06	10/05	35	61
increasing	10	1978	5	70	30	95	07/25	10/09	35	76
severity	11	1977	5	55	25	85	08/02	10/15	63	74
based on	12	1959	20	65	20	65	07/19	10/06	42	86
parameters in columns	13	1982	0	85	0	95	08/03	10/10	21	69
2,4,5,7 & 8.	14	1972	0	60	30	90	07/31	10/01	45	63
	15	1957	5	45	70	60	08/01	10/06	18	67
	16	1981	0	0	35	100	07/26	10/01	0	66+
	17	1985	0	36	0	53	08/01	10/15	22	52
	18	1967	15	0	30	50	07/25	10/12	UKN	68
	19	1966	5	0	5	45	08/01	10/22	24	65
	20	1984	0	25	0	50	08/11	10/15	21	42
	21	1965	0	10	0	70+	08/25	09/25	25	32
	22	1980	15	25	15	25	08/05	09/30	11	42
	23	1953	0	0	5	35	07/27	09/16	5	52+
	24	1976	0	15	0	15	08/15	10/07	21	53
	25	1971	0	0	0	30	08/23	11/01	8	71
	26	1960	0	0	20+	20	08/05	09/07	0	34
	27	1964	0	0	0	5	08/13	09/20	0	39
	28	1983	0	10	0	10	08/08	09/16	0	21
	29	1970	0	0	5	0	08/06	09/14	0	32
	30	1956	0	0	0	40	09/07	09/30	0	24
	31	1969	0	0	0	30	09/07	09/18	5	12
Most	32	1955	0	0	5	15	09/13	09/24	0	12
Severe	33	1975	5	0	5	0	NEVER	N/A	0	0

Column 1: Distance from Point Barrow northward to ice edge (10 August)
Column 2: Distance from Point Barrow northward to ice edge (15 September)
Column 3: Distance from Point Barrow northward to boundary of five-tenths ice concentration (10 August)
Column 4: Distance from Point Barrow northward to boundary of five-tenths ice concentration (15 September)
Column 5: Initial date entire sea route to Prudhoe Bay less than/equal to five-tenths ice concentration
Column 6: Date that combined ice concentration and thickness dictate end of prudent navigation
Column 7: Number of days entire sea route to Prudhoe Bay ice free
Column 8: Number of days entire sea route to Prudhoe Bay less than/equal to five-tenths ice concentration

Source: Naval Polar Oceanography Center, 1986.

Figure 7. Selected Sea Ice Data and Severity Index for the North Coast of Alaska (1953-1985)

In presenting these data, Stringer, Barrett, and Schreurs noted that the fast ice zone can vary by tens of kilometers from year to year, month to month, or place to place. This is particularly true off the Beaufort coast. In this area the fast ice boundary has been observed to range from the 20-m isobath to a point 30 to 40 km (20-25 mi) seaward. These extensions appear to be caused by an absence of winds, currents, and internal forces within the ice sheet that normally keep individual floes within the pack ice from freezing together. They noted that these calm conditions can persist for several weeks before sufficient forces exist for failure to take place along lines considerably closer to shore.

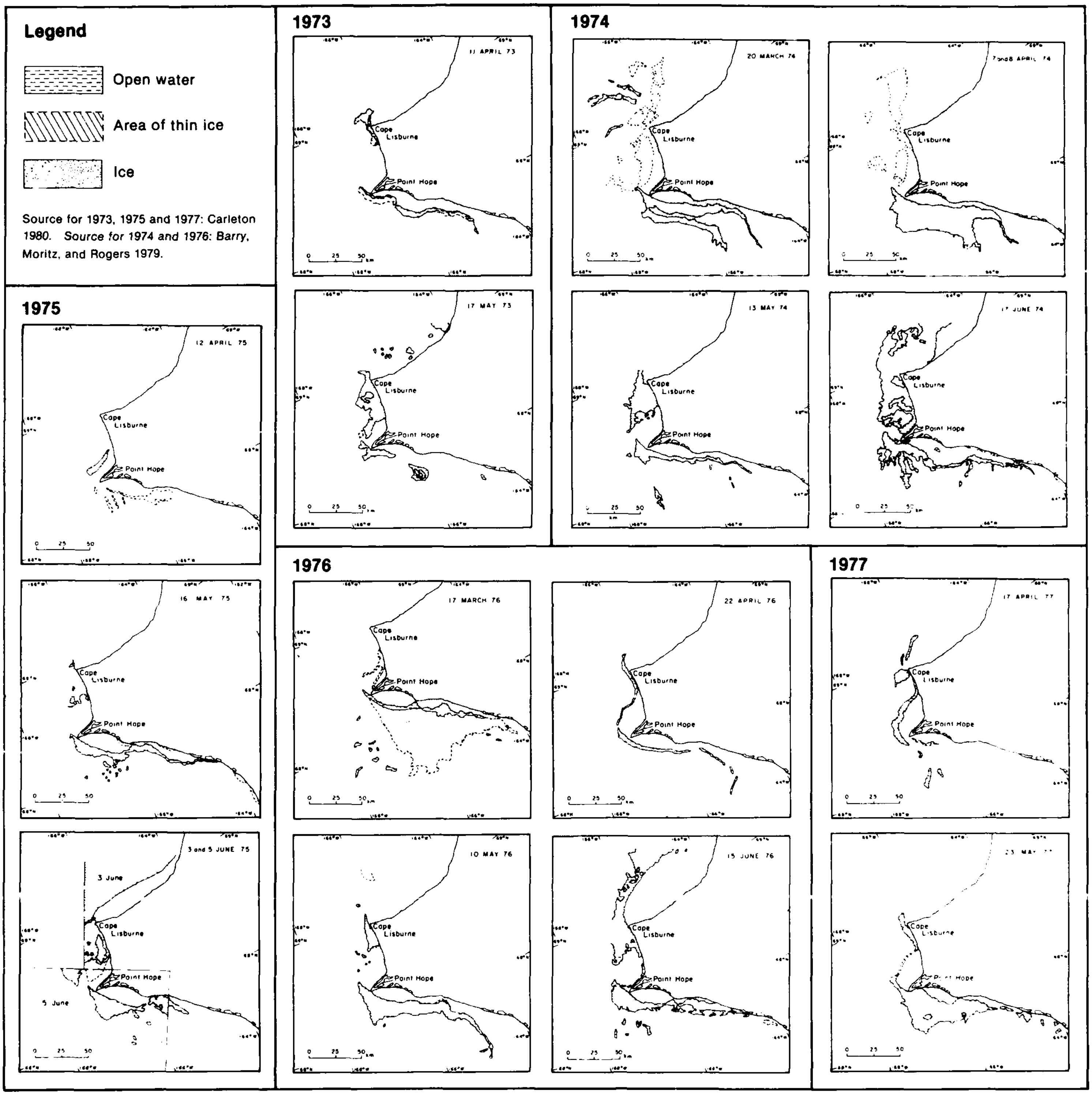


Figure 8. Flaw Leads in the Vicinity of Point Hope

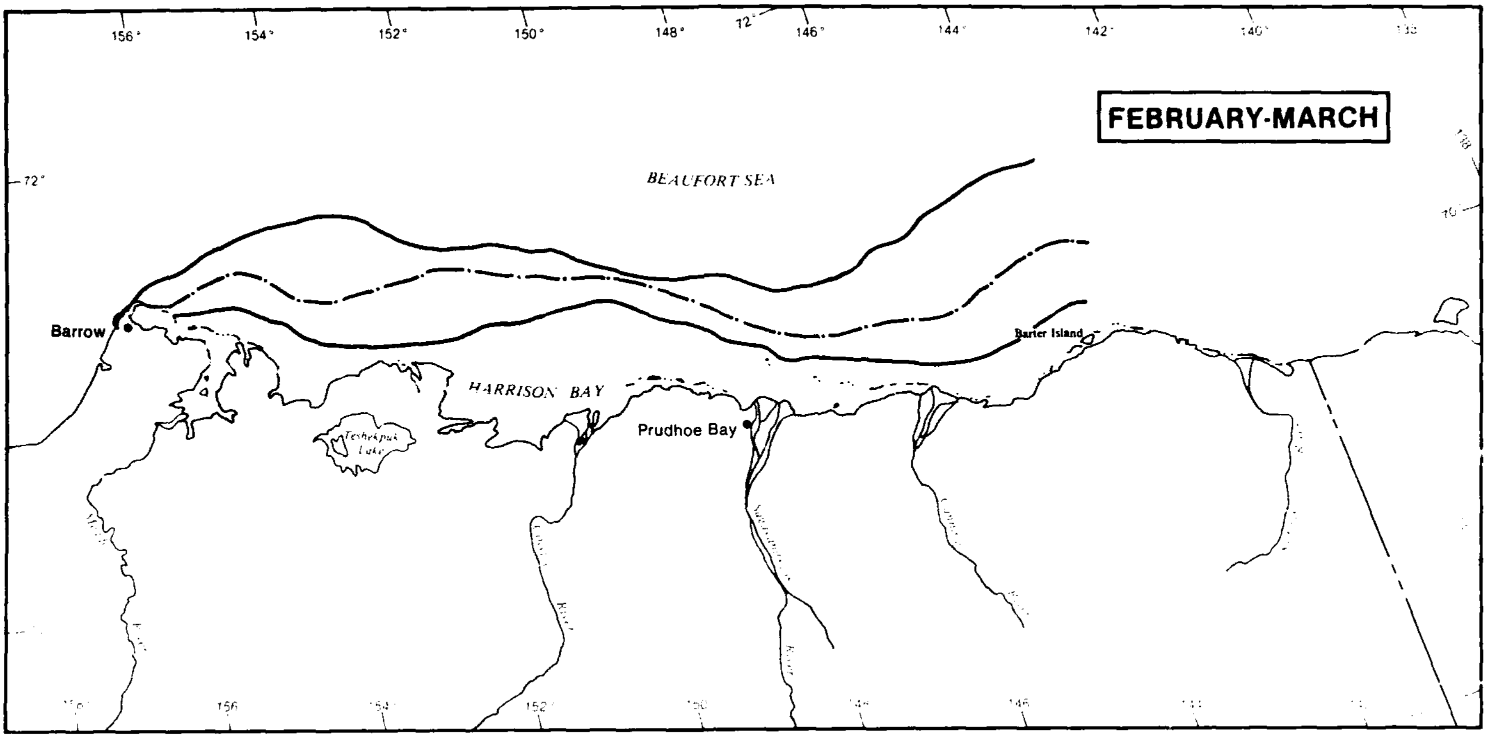


Figure 10. Seasonal Fast Ice Boundary—Beaufort Sea (February/March)

Legend

—·—·— Average
——— Maximum Deviation

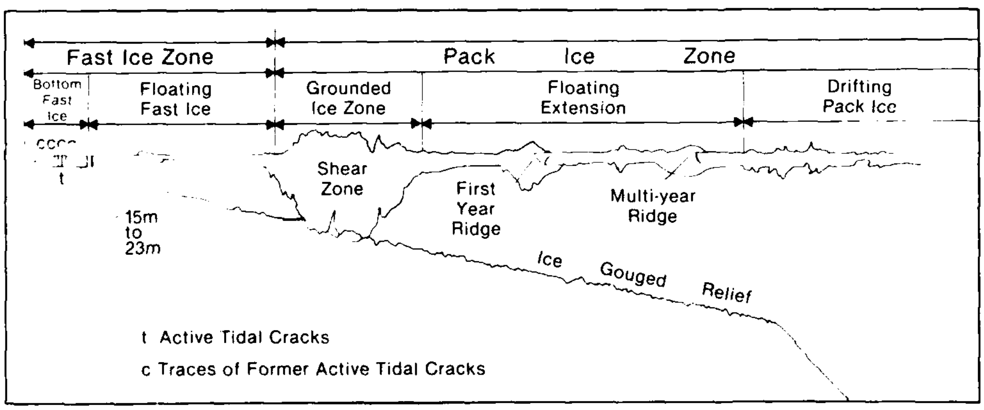
0 50 100
KILOMETERS

0 50 100
NAUTICAL MILES

Synthesized from: Stringer, Barrett and Schreurs, 1980

According to the World Meteorological Organization Sea Ice Nomenclature definition, fast ice includes all ice that has become attached to the shore, even multiyear pack ice. Therefore, the fast ice boundary displayed extends from a few meters to many kilometers from the coast and is not necessarily bounded by the shear ridge zone.

Figure 9. Sea Ice Zones and Types



Fast Ice and Shear Zones

A common feature at the seaward boundary of the fast ice is an area of shear ridges. This feature is prominent along the Beaufort Sea coast, along the Chukchi Sea coast northeast of Cape Lisburne, and north of the Seward Peninsula between Wales and Shishmaref. Shear ridges in the Bering Sea tend to be more localized and of lesser extent and magnitude than farther north. Figure 9 shows the nearshore ice types and interaction with the sea floor typical of the Beaufort Sea coast. Deep gouges in the sea floor are common in the shear zone since these ridges are often grounded. Typical water depth is approximately 20 m for the shear zone in the Beaufort Sea (Stringer, Barrett, and Schreurs 1980), but in the Chukchi Sea this zone usually migrates seaward as the winter progresses. Gouges in the sea floor can also be caused by multiyear ice pieces in the north and by heavily hummocked ice pieces (floebergs) in all areas except the southern Bering Sea.

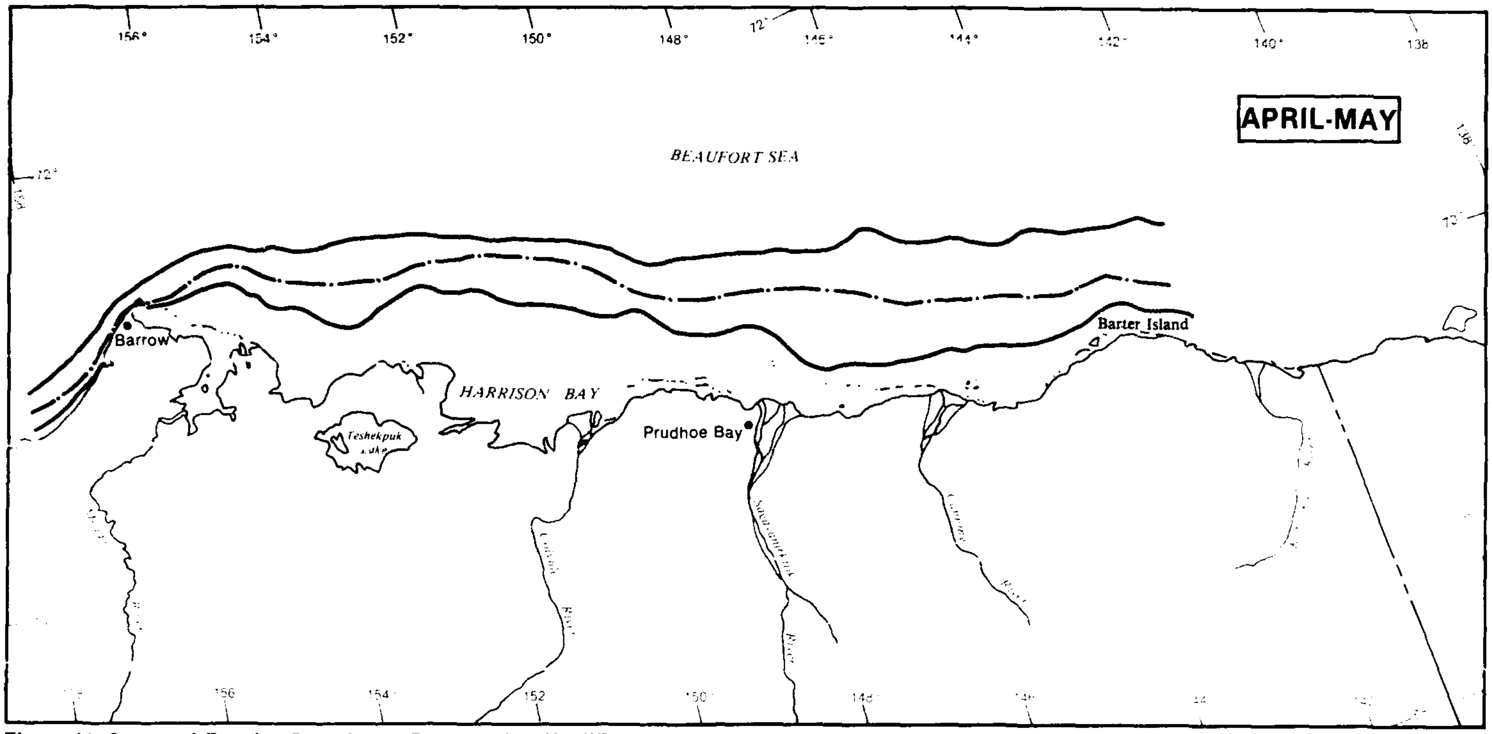


Figure 11. Seasonal Fast Ice Boundary — Beaufort Sea (April/May)

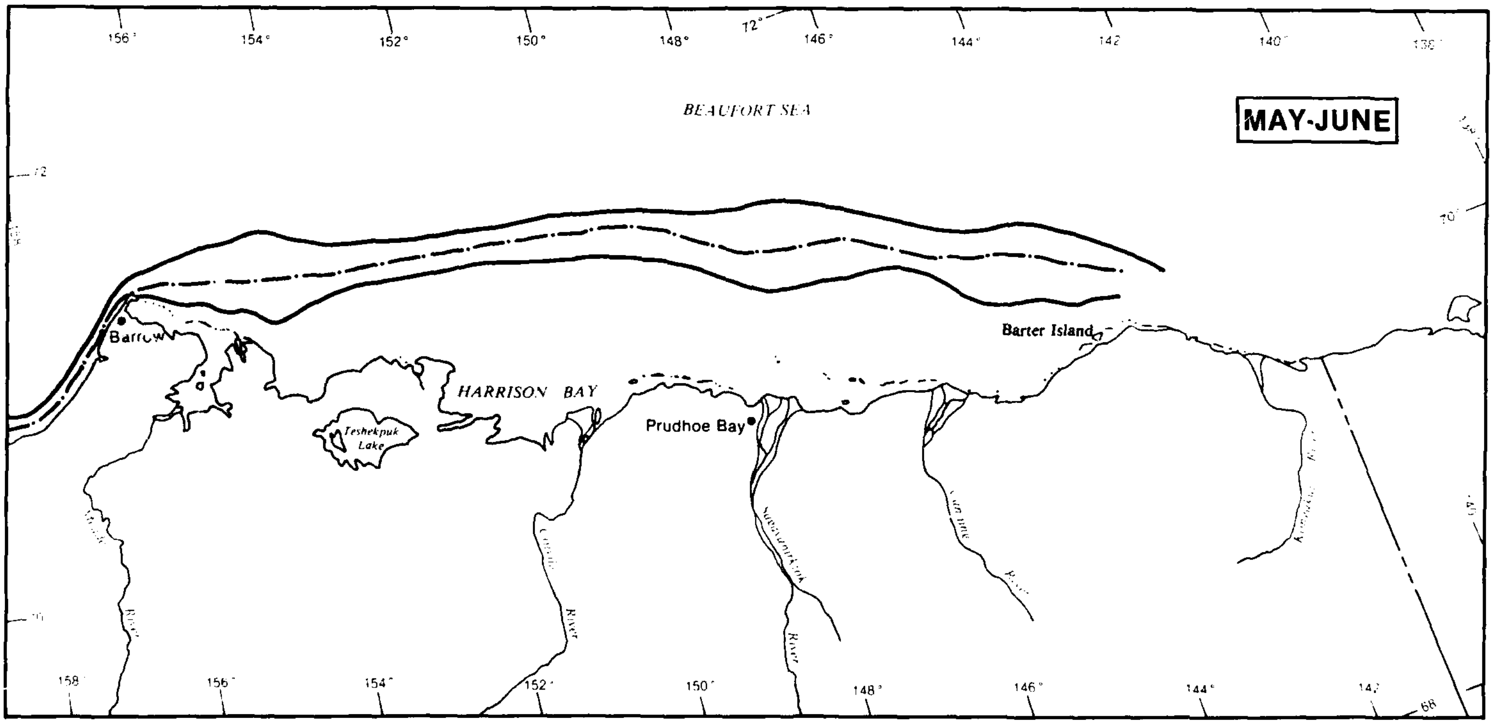
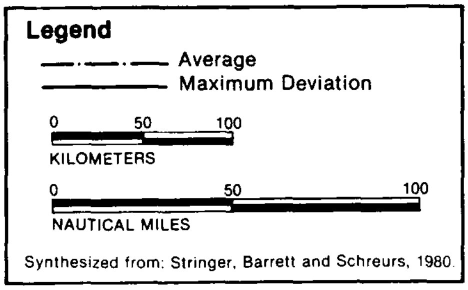


Figure 12. Seasonal Fast Ice Boundary — Beaufort Sea (May/June)



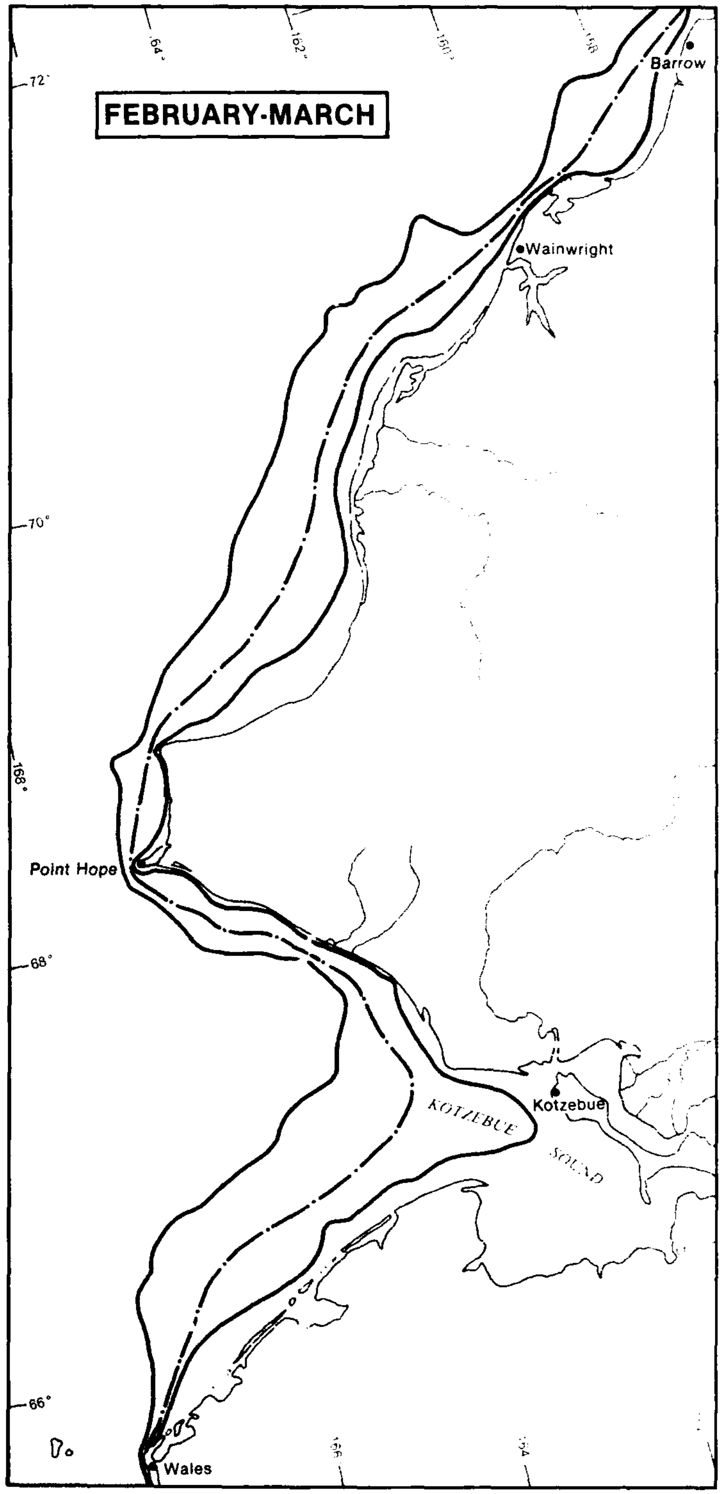


Figure 13. Seasonal Fast Ice Boundary—Chukchi Sea (February/March)

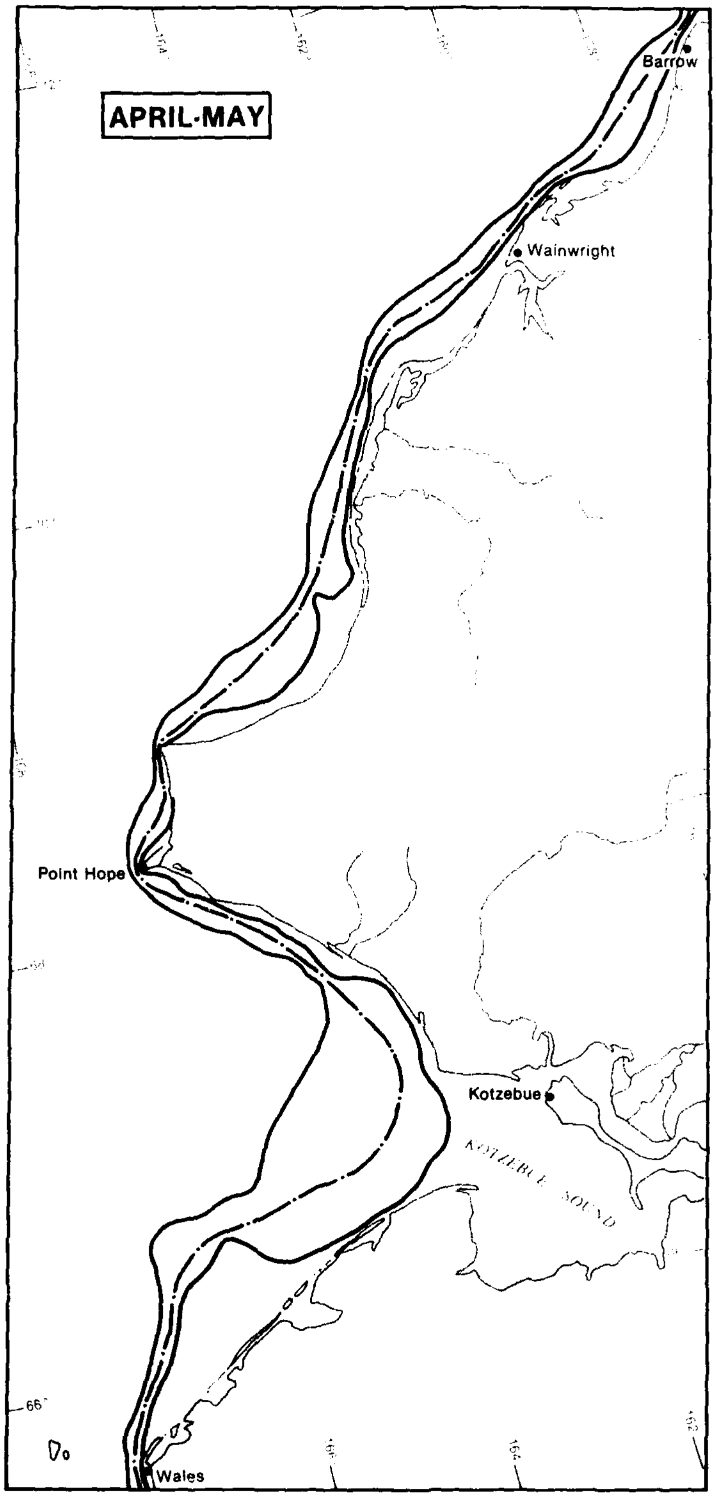


Figure 14. Seasonal Fast Ice Boundary—Chukchi Sea (April/May)

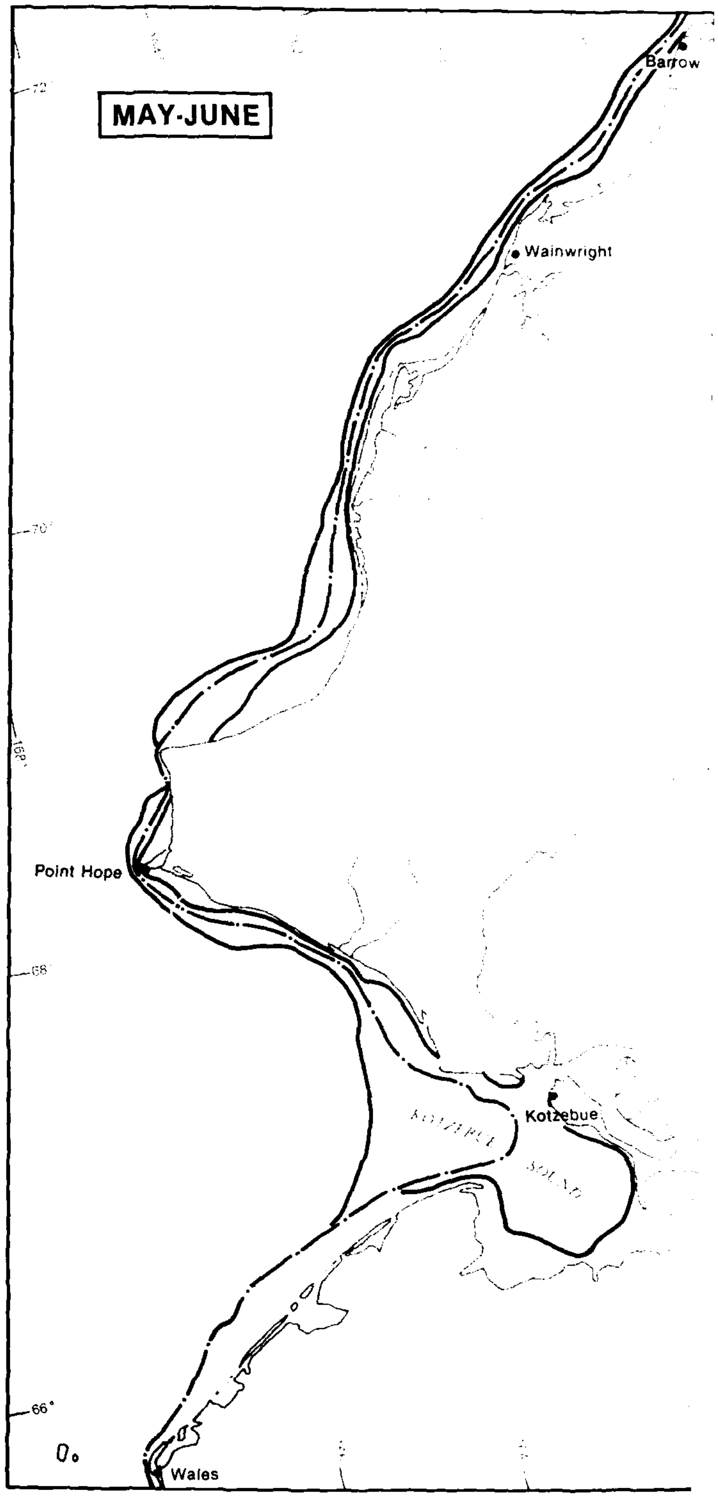


Figure 15. Seasonal Fast Ice Boundary—Chukchi Sea (May/June)

Tides

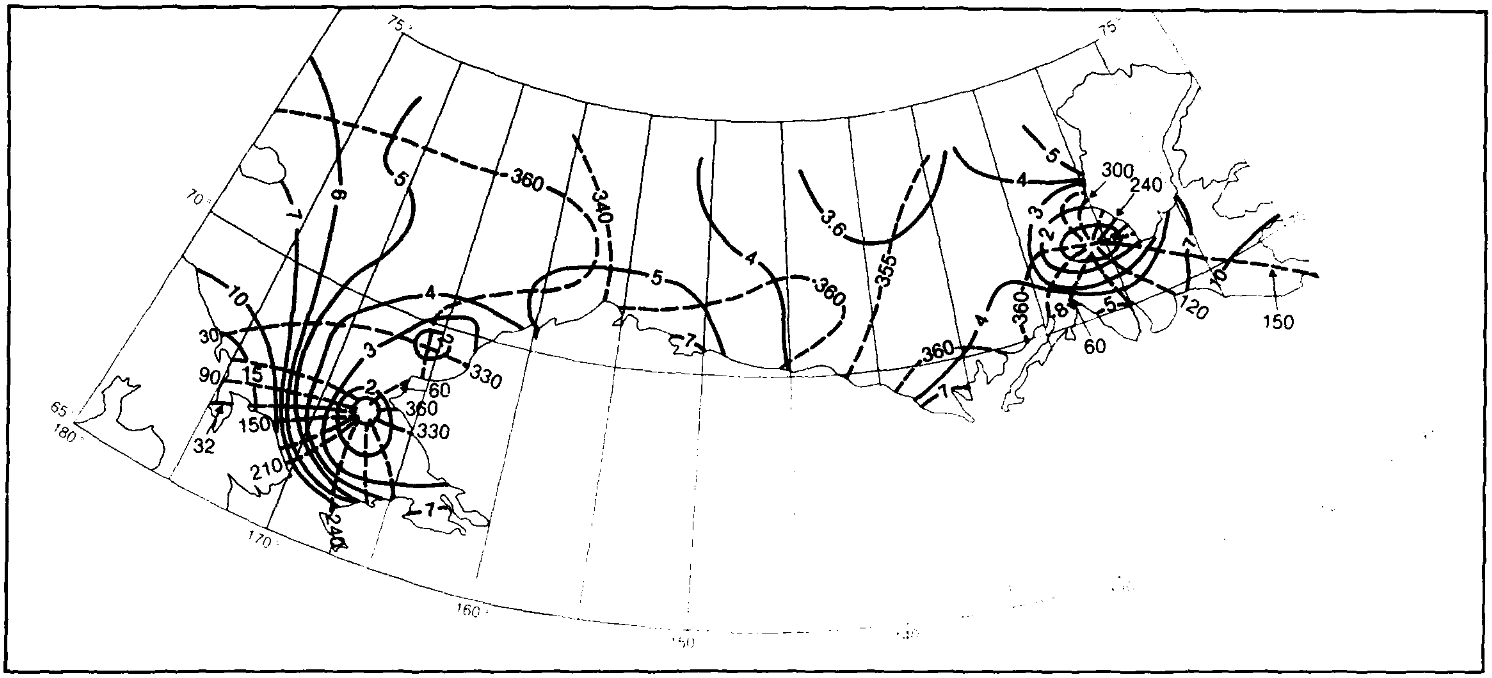


Figure 17. M_2 Tide, Cotidal, and Corange—Beaufort and Chukchi Seas

Legend

Cotidal (broken) and corange (continuous) lines of the M_2 tide. Phase angles (degrees) are referred to Greenwich (solar time); amplitudes are given in centimeters.

Source: Kowalik and Matthews, 1982.

The practical study of tides, aimed at predicting surface elevations and times, involves the empirical treatment of observations made at the desired location over an extended period of time. The motion of the heavenly bodies, particularly the sun and the moon, relative to the earth is known with great precision, so the tide generating potential at any place and time can be computed. Mathematically the potential can be resolved into a finite number of strictly periodic components which, upon addition, produce the total potential of hundreds of tide-generating components that are listed by various authors. Many of the components are of insignificant amplitude and can be excluded from consideration. In practice only seven components are widely used: four semidiurnal (M_2, S_2, N_2, K_2) and three diurnal components (K_1, O_1, P_1) (McLellan 1965). The names and relative weights of these components are shown in Figure 16.

Theoretical models of tides must be verified on the strength of observations at tidal stations where the tide wave has been distorted through passage over a continental shelf of complex topography. There have been some scattered observations of tides along the Chukchi and Beaufort sea coasts around the turn of the century and in the last 20 years. All available data are considered too sparse to draw a consistent picture of the tide distribution in the Beaufort and Chukchi Seas. As an effort to partially rectify this situation, a pattern of the M_2 component was generated, using the equations of motion and continuity in spherical coordinates, by Zygmunt Kowalik and J.B. Matthews (1982). The results of their computations of cotidal and corange are shown in Figure 17. Keep in mind that the M_2 component is not the whole tide but is the largest of the components going to make up the tide. Actual astronomical tide ranges are about half a foot along the Chukchi and Beaufort sea coasts from Cape Lisburne to Barter Island. The tide range in Kotzebue Sound is greater at 2 to 2½ ft and in the eastern Beaufort Sea and Amundsen Gulf tide ranges are slightly more than 1 ft.

SYMBOL	NAME OF PARTIAL TIDE	COEFFICIENT RATIO
M_2	Principal Lunar	100.0
S_2	Principal Solar	46.6
N_2	Larger Lunar Alliptic	19.2
K_2	Luni-Solar Semi-Diurnal	12.7
K_1	Luni-Solar Diurnal	58.4
O_1	Principal Lunar Diurnal	41.5
P_1	Principal Solar Diurnal	19.4

Contracted from table 15.1, Elements of Oceanography (McLellan 1965).

Figure 16. Tide Generating Components

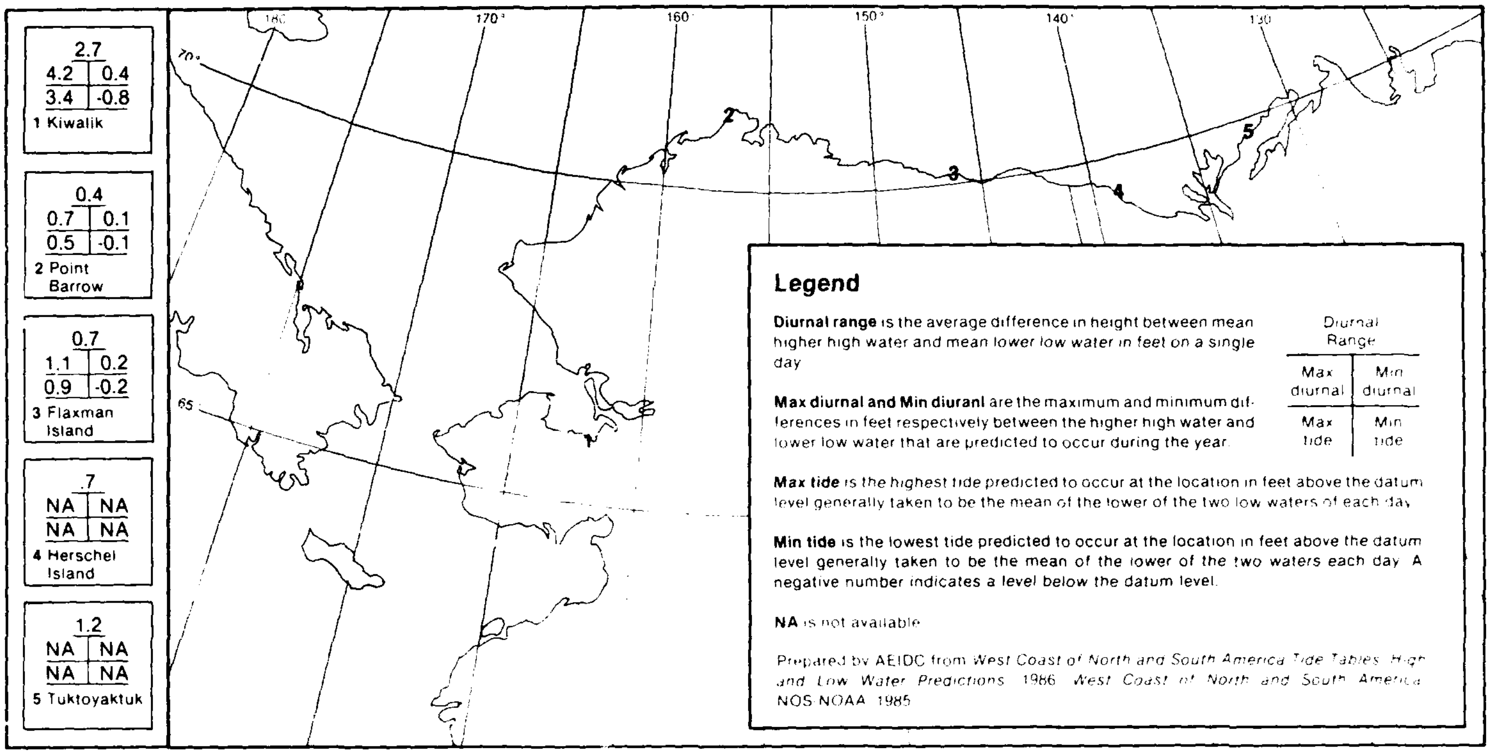


Figure 18. Tide Data

Storm Surges

Storm surges are oscillations in the period range of a few minutes to a few days, in a coastal or inland water body, resulting from forcing from atmospheric weather systems (Murty 1984). By this definition, wind-generated waves (often referred to as wind waves) and swell, which have periods of several seconds, are excluded. The spectrum of storm surge waves is centered around 10^{-4} cycles per second (CPS), which gives a period of about three hours. However, depending mainly on the topography of the water body and secondarily on other parameters, such as the direction of movement of the storm, strength of the storm, stratification of the water body, presence or absence of ice cover, and nature of tidal motion in the water body, the periods of the water level oscillations may vary considerably. Even in the same water body, storm surge records at different locations can exhibit different periods. Although storm surges belong to the class known as long waves, as do astronomical tides and tsunamis, there are at least two important differences. First, whereas tides and tsunamis occur on an oceanic scale, storm surges are simply a coastal phenomenon. Second, significant tides and tsunamis cannot occur in an enclosed, small, coastal or inland water body, but storm surges can occur even in lakes, or in canals and rivers. The range or height of a storm surge depends not only on characteristics of the storm but also on the topography onshore and bathymetry offshore. Shallow water bodies generally experience surges with greater ranges. Also, the height of a storm surge is less if the sea floor is steep than if there is a shallow slope to the sea floor (Murty 1984). Storm characteristics that effect the height of a surge include atmospheric pressure; wind speed, direction, and length of fetch; the latitude; and the direction and speed of storm movement. Air and water temperature differences also affect the height of surges.

Beaufort Sea Coast

The Beaufort Sea coast from Point Barrow east to Demarcation Point is of low relief, 15 ft or less, characterized by extensive deltas of major rivers and numerous smaller streams. The sea floor slopes gently to the 100 m line about 50 mi offshore. These hydrographic conditions are very favorable for storm surge flooding. The timing of storm surges in relation to high and low tide is generally irrelevant since meteorological tides or storm surges far exceed the astronomical tide ranges, which are less than a foot (30 cm). Storm surges are more likely to occur from August to October, the open water season along the Beaufort Sea coast. In some years the ice is well north of the coast, allowing for a long fetch for westerly to northwest winds in storms moving west to east along a track well north of the coast. The variation in the extent of open water north of the coast determines to a large extent the development of the wind fetch needed for storm surges. In some years the ice never moves more than a few miles offshore and the open season is very short; e.g., the 1975 season. In other years the ice edge may be well over 100 mi offshore, allowing for a well-developed wind fetch and higher surges. Surges of a meter (3 ft) or so are quite common, and surges of over 3 m (10 ft) have been observed, particularly from driftwood lines. In 1970 a storm occurred which deposited driftwood on long stretches of beach up to a maximum height of 3.4 m (11 ft) above sea level. This event was judged by Reimnitz and Mauerer (1979) to be the highest surge at least since 1890 and possibly represented a 100-year event.

There have been several known cases of storm surges in winter in which cracking of ice occurred and water and ice have come onshore. The most likely tracks for storms that cause surges are from the Bering north-northeast through the Chukchi Sea, then eastward; or eastward from north of Siberia toward Banks Island. (Figure 19) Negative surges have also occured with high pressure and persistent easterly winds, which move water away from the coast to the right of the wind. These can be a hazard in shallow coastal areas such as Prudhoe Bay, where barges, etc., may ground with a negative surge. NOAA Nautical Chart, No. 3 (NOAA 1983), indicates possible negative surges of 0.8 m (2.6 ft) along the coast.

Chukchi Sea Coast

The northern part of the area is generally of low relief, covered with numerous shallow lakes from Point Barrow to Point Lay. The onshore terrain becomes more rugged south to Cape Lisburne and Point Hope. The topography is very rugged at the west end of the Brooks Range. Offshore the ocean floor is gently sloping, except for the areas west of Point Hope and northwest of Point Barrow.

The area most susceptible to storm surge flooding is north from Point Lay. Nearshore, surface currents flow primarily toward the northeast, parallel to the coast. Strong southwest storm winds tend to accelerate this current causing a net transport of surface water to the right toward the coast. Storms moving from the west or southwest can develop sufficient fetch for surges up to 3 m (10 ft) during the ice-free period from July to October. Shorefast ice forms along the entire coast in late October and early November, and ice also forms over the open sea, thereby diminishing the occurrence of storm surges. Known cases of storm surge flooding have been from August to about mid-October. A surge up to 3.5 m (11 ft) occurred at Barrow in October 1963 and was judged to be a 125-year event. For the most part, surges of 2 to 3 m are considered to be 10-year events (Lewbel and Gallaway 1984).

Kotzebue Sound

The north shore of Kotzebue Sound is of moderate relief, becoming less rugged to the east and south. Offshore the sound is generally shallow, less than 20 m with the exception of a deeper channel offshore from Cape Espenberg, at the entrance to the sound. These conditions are favorable for the development of storm surges. Most storm surges occur in late summer and fall. From November to May the sound is generally ice-covered, which reduces the effects of storm surges. However, there have been several occurrences of flooding on top of the shorefast ice in the area. Storm tracks from surge-causing storms can be either from the south (from Bering Sea to southern Chukchi Sea) or from the northwest (from the open water north of Siberia to Kotzebue Sound). See Figure 19.

Northwest Coast of Seward Peninsula

Onshore topography is generally of low relief. A string of barrier islands lies offshore. Offshore bathymetry has variable slope, with the 20 m isobath anywhere from 5 to 25 mi offshore. Prevailing ocean currents are generally parallel to the coast near shore. Southwest winds in the eastern quadrant of storms moving northward tend to accelerate this current, causing beach erosion as well as storm surge. Storm surges and beach erosion are, for the most part, limited to the ice-free season from June to November.

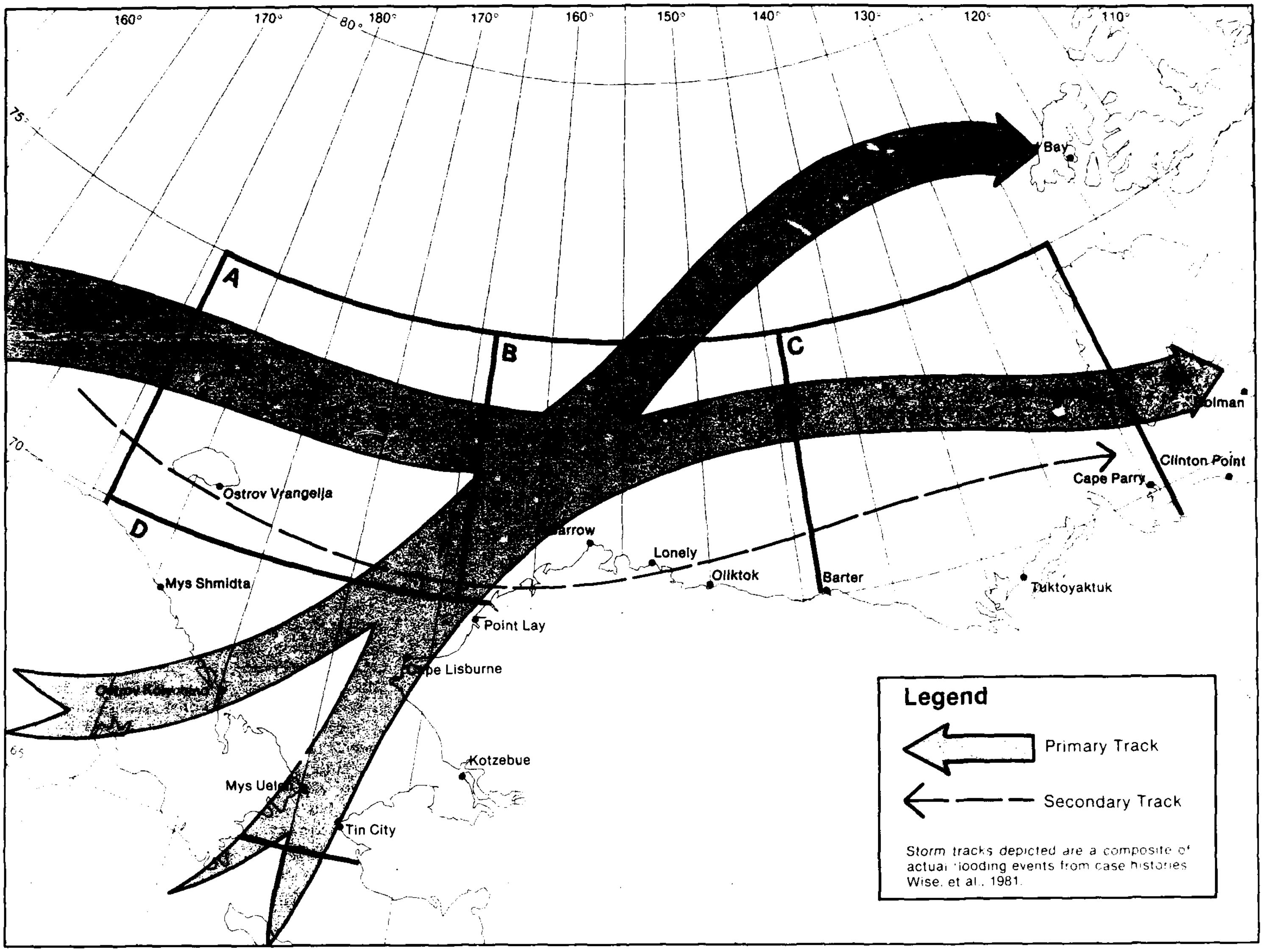


Figure 19. Storm Tracks with Storm Surge Floods

Superstructure Icing

Structural icing on ships, offshore structures, and port facilities is a wintertime hazard in open waters and coastal sections of Alaska. The icing causes slippery decks, renders moving parts inoperable, and, in extreme cases, causes uneven loading and raises the center of gravity on small ships. Accumulation of ice on rigging and on deck equipment such as crab pots also increases wind effects because a larger surface area is presented to the wind. Ice forming on structural surfaces above or close to a body of water arises principally from sea spray (Nauman and Tyage 1985; Liljestrom 1985), with lesser amounts from atmospheric precipitation (freezing rain and wet snow) and fog (arctic sea smoke, white frost, black frost). Sea spray, the most dangerous source of icing, is produced by the breaking of waves against obstacles such as ships' hulls, other floating objects, shore structures, and, possibly, other sources (Minsk 1977).

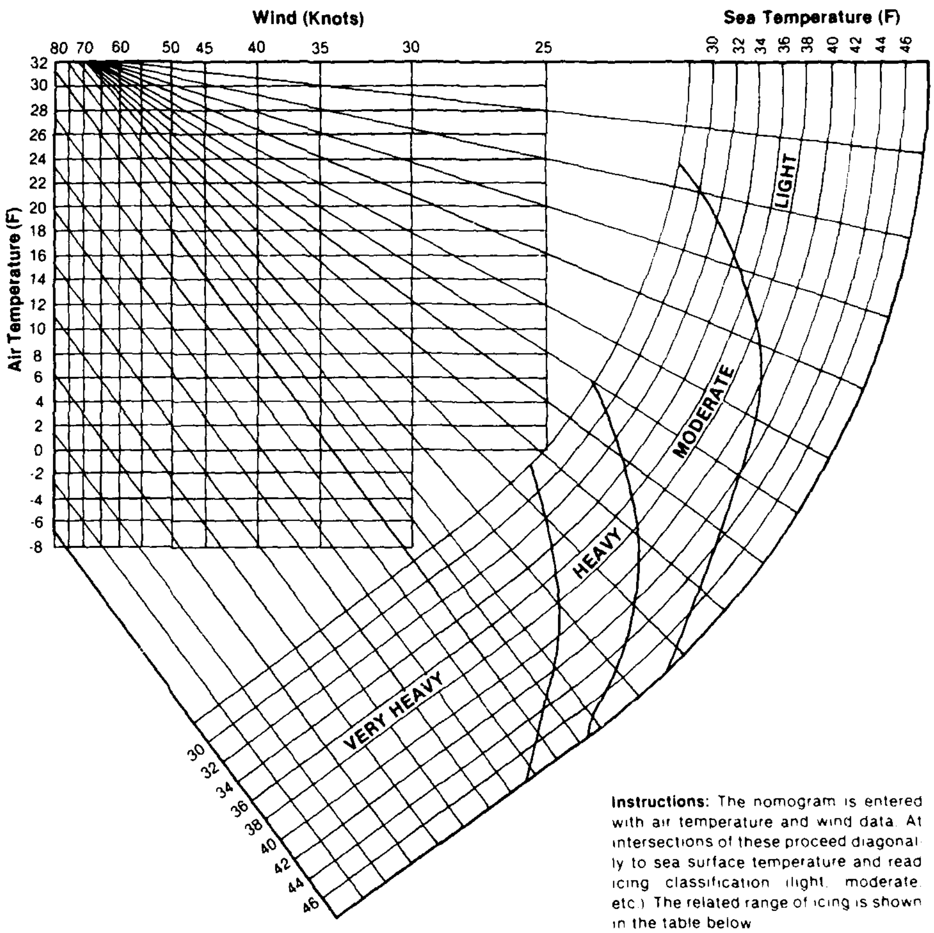
Statistical analysis (Borisenkov and Panov 1972) of more than 3,000 cases of ship icing indicates that in 86% of the cases icing was caused by ocean spray alone. Spray combined with fog, rain, or drizzle (liquid sources) accounted for only 6.4% of the cases, and spray combined with (solid source) snow only 1.1%. The cases of icing attributable only to fog, rain, or drizzle account for 2.7% (Minsk 1977). In the remainder of icing cases data were not sufficient to determine the cause.

Since the overwhelming majority of superstructure icing on ships and offshore structures is from sea spray, the remainder of this section will concentrate on this type of icing. Since a ship can present different aspects to the wind and spray, it is to be expected that the amount of spray reaching the ship will vary: Russian observations (Kultashev, et al. 1972) showed that the greatest frequency of spray and, therefore, icing occurs when a ship is heading into the wind at an angle between 15° and 45°. Asymmetrical icing occurs under this condition, with the greater accumulation on the windward side. Less icing occurs with the ship headed directly into the wind, and then accumulation tends to be uniform. With ships heading downwind, spray icing is generally much less than at other angles. In developing the nomogram for forecasting spray icing potential, downwind cases (those for which the ship's heading was 120° or greater off the wind) were not used.

Meteorological/oceanographic conditions necessary for significant spray icing are water temperatures less than 8°C, winds of 25 knots (13 meters per second) or more, and air temperatures less than −2°C (28°F, the freezing temperature of seawater of average salinity). Generally, the stronger the wind, and the colder the air and water, the higher the rate of icing on comparable vessels or structures. In some cases, however, where the wind fetch is not sufficient to fully develop waves, icing rates are lower.

The accompanying potential superstructure icing rate nomogram (Figure 20) is a modification of that shown in Wise and Comiskey (1980), using the open cases appearing in Pease and Comiskey (1985), developed

Figure 20. Superstructure Icing Rate Nomogram



Instructions: The nomogram is entered with air temperature and wind data. At intersections of these proceed diagonally to sea surface temperature and read icing classification (light, moderate, etc.) The related range of icing is shown in the table below

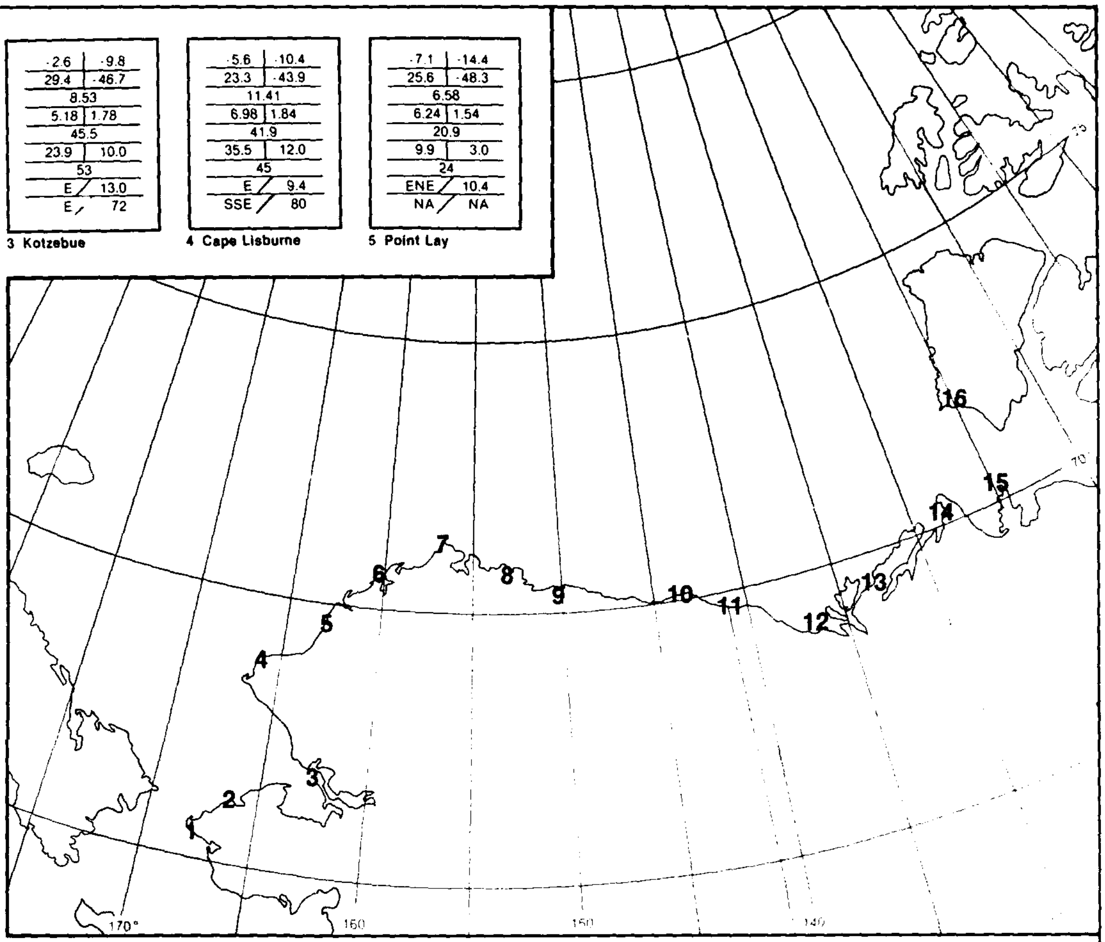
Icing Classification	Rate per Hour
Light	0 to 3 inches
Moderate	3 to 8 inches
Heavy	8 to 2 inches
Very Heavy	2 inches

Adapted from Wise and Comiskey, 1980, using data from Pease and Comiskey, 1985.

from icing case histories in the Gulf of Alaska and southern Bering Sea. Icing intensities in inches per hour are also from Pease and Comiskey (1985). If a vessel experiencing icing takes evasive action (i.e., changes heading, reduces speed, seeks shelter, etc.), icing rates experienced would probably be less. The potential superstructure icing rate nomogram (Figure 20) was developed from icing case histories in the Gulf of Alaska and southern Bering Sea. We know of no set of case histories of icing north of the Bering Strait.

Kozo (1985), in assessing the possible occurrence of superstructure icing in the Chukchi Sea, shows no chance of spray icing in the Chukchi Sea or, presumably, the Beaufort Sea from December through April because the entire area is covered with sea ice during those months. In May, moderate to heavy icing is possible just north of the Bering Strait under conditions of minimum sea ice extent, minimum air temperature, and winds over 28 knots. The possibility of moderate to heavy superstructure icing spreads northward in the Chukchi Sea to 72°N, with minimum sea ice, in June. In July, the air temperatures are too warm for more than light to moderate superstructure icing over all the area, except near the pack ice edge. Under extreme conditions of minimum ice and minimum air temperature, moderate to heavy icing may occur north of 70°N. In August, as air temperatures begin to cool off in the Beaufort and northern Chukchi Seas, the possibility of moderate icing increases under extreme conditions of minimum air temperatures and pack ice extent, and winds of 28 to 50 knots. In September, the area in which possible heavy superstructure icing is greatest extends from the pack ice edge south to Cape Lisburne and the Siberian coast. Light to moderate icing is possible south to the Bering Strait under extreme conditions. By October and November, the seasonal advance of the pack ice limits the possibility of icing of all intensities to the Chukchi Sea.

Station	Mean Annual Maximum (°C)	Mean Annual Minimum (°C)	Highest (°C)	Lowest (°C)	Total Precipitation Average Annual (in)	Precipitation Greatest Month	Precipitation Greatest Day	Snowfall Average Annual (in)	Snowfall Greatest Month	Snowfall Greatest Day	Snow depth Annual Maximum on Ground (in)	Prevailing Direction / Average Annual Speed (knots)	Fastest Direction / Speed (knots)
1 Tin City	-3.9	-8.7	23.3	-40.6	12.08	5.79	1.93	54.7	34.4	8.6	34	N / 15.4	SSE / 70
2 Shishmaref	-2.9	-9.9	25.6	-44.4	8.05	4.36	1.80	31.9	20.3	NA	21	NA / NA	NA / NA
3 Kotzebue	-2.6	-9.8	29.4	-46.7	8.53	5.18	1.78	45.5	23.9	10.0	53	E / 13.0	E / 72
4 Cape Lisburne	-5.6	-10.4	23.3	-43.9	11.41	6.98	1.84	41.9	35.5	12.0	45	E / 9.4	SSE / 80
5 Point Lay	-7.1	-14.4	25.6	-48.3	6.58	6.24	1.54	20.9	9.9	3.0	24	ENE / 10.4	NA / NA
6 Wainwright	-8.4	-15.1	26.7	-48.9	5.75	9.29	4.00	17.4	11.8	4.0	15	E / 8.7	NA / NA
7 Barrow	-9.8	-15.7	25.6	-48.9	4.75	2.81	1.00	27.9	21.2	15.0	30	E / 11.8	SW / 60
8 Lonely Point	-8.6	-14.9	27.2	-48.3	2.93	1.52	0.73	16.9	9.1	4.2	11	NA / NA	NA / NA
9 Oliktok	-9.2	-16.6	23.9	-45.0	5.39	3.92	3.00	18.8	12.3	3.0	10	NA / NA	NA / NA
10 Barter Island	-9.3	-15.6	25.6	-50.6	6.49	4.91	2.25	42.1	35.8	17.0	47	E / 13.2	W / 75
11 Komakuk Beach	-7.6	-15.3	30.0	-50.0	5.35	NA	1.75	23.7	NA	6.0	NA	NA / NA	NA / NA
12 Shingle Point	-6.2	-14.5	30.1	-52.2	8.44	NA	2.23	35.8	NA	7.0	NA	NA / NA	NA / NA
13 Tuktoyaktuk	-7.3	-14.5	30.0	-50.0	5.42	NA	1.16	25.7	NA	5.0	NA	E / 9.5	NA / NA
14 Nicholson Peninsula	8.5	-15.4	30.6	-48.3	4.31	NA	1.13	16.0	NA	4.0	NA	E / 10.8	NA / NA
15 Cape Parry	-9.5	-15.3	25.0	-47.2	6.15	NA	1.39	49.6	NA	6.0	NA	E / 10.7	NA / NA
16 Sachs Harbour	-10.8	-17.4	22.2	-52.2	4.50	NA	0.86	29.2	NA	8.4	NA	SE / 11.1	NA / NA



Legend

Temperature	6.9	2.3
	23.9	-16.1
Total Precipitation	61.19	
	17.34	5.49
Snowfall	99.2	
	54.8	17.0
Snowdepth	34	
Surface Wind	WSW / 13.1	
	SW / 109	

		Temperature(°C)	
17.6	3.6	Mean Annual Maximum	Mean Annual Minimum
22.2	-14.4	Highest	Lowest
		Total Precipitation (inches) (Rain and Snow)	
114.30		Average Annual	
34.87	7.59	Greatest Month	Greatest Day
		Snowfall (inches)	
58.5		Average Annual	
46.9	14.2	Greatest Month	Greatest Day
		Snow depth (inches)	
40		Annual Maximum on Ground	
		Surface Wind (knots)	
SSE / 9.3		Prevailing Direction / Average Annual Speed	
SSE / 52		Fastest Direction / and Speed	

Where the mean annual temperature (average of the mean annual maximum and minimum) is less than zero some type of permafrost will probably be present.

These data can be used for long-range planning and design criteria. More detailed information can be obtained from the National Climatic Data Center and the Arctic Environmental Information and Data Center in Anchorage.

NA = Information is not available

Prepared from NOAA/NESDIS and Canadian AES data.

Figure 21. Climatic Means and Extremes

Hypothermia

Hypothermia is the cooling of the body's core temperature to 95°F or below. It can cause shivering, numbness, and disorientation. In the extreme it can cause death. The body loses heat gradually in cold, dry conditions, but quickly becomes hypothermic in wet conditions. Rain, immersion in cold water, and perspiration can all cause rapid heat loss. However, the evaluation and treatment of hypothermia, whether wet or dry, on land or water, is essentially the same, namely to warm the victim by whatever appropriate means are available.

The following discussion was taken in part from Peters (1982).

The body loses heat in five ways:

- A large amount of heat is lost from the body in respiration. Exhaled warm air is replaced by cooler inhaled air, producing a net heat loss. The amount of the net heat loss can be reduced by covering the mouth/nose with wool or fur, thereby "prewarming" the inhaled air as it passes through the material which has been warmed by exhaled air and by heat radiating from the body.

- Evaporation of perspiration from the skin and moisture from the lungs contributes greatly to the amount of heat lost by the body. Although evaporation cannot be prevented, the amount of evaporation (and therefore cooling) can be controlled. Wearing clothing that can be opened or removed easily for ventilation will let water vapor escape and not condense to liquid water in the clothing. Keeping clothing dry preserves its insulating value and reduces heat loss.

- Sitting on snow, touching cold equipment, and being rained upon are all examples of how heat can be lost as a result of conduction. If an individual becomes wet a tremendous amount of body heat is lost rapidly. Deaths have occurred as a result of immersion in water below 40°F—body temperature could not be maintained. Although not as immediately serious, perspiration, rain, or wet snow should never be allowed to saturate articles of clothing, as this seriously reduces their insulating properties.

- Radiation causes the greatest amount of heat loss from the body from uncovered surfaces, particularly the head, neck, and hands. Coverage of these areas, therefore, is extremely important in keeping warm.

- The body continually warms (by conduction) a thin layer of air next to the skin. If the warm layer is removed by wind or air currents (advection), the body is cooled. The primary function of clothing is to retain this layer of warm air next to the skin by enclosing air in cell walls or between numerous fibers, while allowing water vapor to pass outward. Heat is lost rapidly with the lightest breeze unless the proper type of clothing is worn to prevent the warm air from being advected away.

Deaths have been attributed to a loss of body heat at temperatures of 40°F, with a 30 mph breeze. Under these conditions, the cooling effect on the skin is equal to that of much lower temperatures due to increased evaporation and convection. With lower temperatures and/or strong winds, cooling occurs even more rapidly. Wind protection and insulation (dead air space) can help ensure that body heat is retained at a safe level.

Treatment

Recognition and proper treatment of hypothermia must be prompt. Delays even after rescue can cost a person his life. Low body temperature is the best indication of hypothermia. Blood pressure and pulse are also good indicators. The pulse is generally slow and irregular, while blood pressure is low.

The hypothermia victim is pale in appearance, the pupils are constricted and react poorly to light, and respiration is slow and labored. He will usually be shivering violently, with frequent muscular rigidity. There may also be an appearance of intoxication.

Emergency treatment must begin as soon as possible to stop the drop in body temperature. Wet clothing should be removed. If the body temperature is 97°F or above, no treatment other than dry clothing and moving the victim to a warm area is generally necessary. If these are not available, the wet clothing should not be removed.

Combatting "afterdrop" in the core body temperature is extremely important. When heat is applied to the arms and legs, it causes those blood vessels to relax. This allows cold blood to flow back into the body core, further cooling the vital organs. Warming of the trunk of the body should be the prime concern.

During experiments in conjunction with the U.S. Coast Guard, researchers determined that the best warming technique was from the inside out, by having the victim breathe moist, warmed oxygen (Wilson 1976).

The next best treatment is a hot bath, with the water temperature between 90 and 100°F. If a tub is not available, an inflated life raft could be used. If possible, the limbs should remain out of the water. When no tub-type facility is available, a hot (115°F) shower while wrapped in towels or blankets is preferable.

When hot water for a tub or shower is unavailable, wrap the victim in blankets in a warm room with a heating pad or well-wrapped hot water bottle on the chest, or apply body warmth by direct contact with a rescuer.

Warm liquids may be given, but care must be taken to insure the victim is conscious and does not breathe the liquid into his lungs. Alcohol should never be given because it causes "afterdrop." Observe the victim's respiration closely and monitor for vomiting.

It has been learned in studies done in Alaska that victims of wet hypothermia can survive for a prolonged time in cases of deep cooling. Apparently, in the rapid cooling which occurs with wet hypothermia, physiological changes undergone by the body are more likely to be reversible than in the slower cooling of dry hypothermia. There have been victims of immersion hypothermia who were apparently dead but revived with proper treatment.

Wind Chill (Equivalent Temperatures)

The temperature of the air is not always a reliable indicator of how cold a person will feel outdoors. Other weather elements, such as wind speed, relative humidity, and sunshine (solar radiation), also exert an influence. In addition, the type of clothing worn, together with the state of health and the metabolism of an individual, influence how cold a person will feel. Cooling may be described as loss of heat from exposed flesh. Freezing occurs when there is such total heat loss that ice forms in the exposed tissues. The cooling power of the atmosphere (by wind) is primarily heat transfer by advection—in human cases, by exposure of uncovered flesh to the environment. Even small amounts of air movement have considerable chilling effect because this movement disrupts or removes the thin layer of warmed air that builds up near and about the body. This air movement leads to loss of total heat, since heat is transferred from the core of the body to rewarm the new colder air, replacing that blown away. Therefore, wind chill not on' leads to frostbite locally, but may contribute to general hypothermia.

Equivalent Wind Chill Temperature																				
Wind Speed		Cooling Power Of Wind Expressed As "Equivalent Chill Temperature"																		
[illegible]	[illegible]	Temperature (°C)																		
[illegible]		12	8	4	0	4	8	12	16	20	24	28	32	36	40	44	48	[illegible]	[illegible]	[illegible]
		Equivalent Chill Temperature																		
[illegible]	[illegible]	12	8	4	0	4	-8	-12	-16	-20	-24	28	-32	-36	-40	-44	-48	-52	-56	
[illegible]	[illegible]	9	5	0	-4	8	-13	17	-22	-26	-31	-35	-40	-44	-49	-53	-58			
[illegible]	[illegible]	5	0	-5	-10	-15	21	-26	-31	-36	-42	-47	-52	-57						
[illegible]	[illegible]	3	-3	8	-14	-20	-25	-31	-37	-43	-48	-54								
[illegible]	[illegible]	1	-5	-11	17	23	-29	-35	-41	-47	-53	-59								
[illegible]	[illegible]	0	6	-12	-18	-25	-31	-37	-43	-49	-56									
[illegible]	[illegible]	0	-7	-13	-19	-26	-32	-39	-45	-51	-58									
[illegible]	[illegible]	1	7	14	-20	-27	-33	-40	-46	-52										
[illegible]	[illegible]	-1	-8	-14	21	27	-34	-40	-47	-53										
[illegible]	[illegible]	1	8	-14	-21	-27	-34	-40	-47	-53										
[illegible]	[illegible]	1	-8	-14	-21	-27	-34	-40	-47	-53										
		Little Danger					Increasing Danger (Flesh May Freeze Within 1 Minute)													
Danger of Freezing Exposed Flesh For Properly Clothed Individuals																				

Figure 22. Equivalent Wind Chill Temperature

Adapted from NWS/NOAA Technical Procedures Bulletin No. 165. Effective Temperature (Wind Chill Index) 1976.

During the antarctic winter of 1941 Siple and Passel developed a formula to determine wind chill from experiments made at Little America (Siple and Passel 1945). The formula relates heat loss (H) from an object or person to wind speed and to the difference in temperature between the air and the object or person (DT). It is measured in heat units (calories) per unit area over time. The skin temperature of most people is approximately 33 °C (91.4 °F). Heat losses for the human body can then be computed for any combination of wind and temperature. Equivalent temperature is based on calm conditions and a person walking vigorously at 3 knots (4 mph). Each combination of wind and air temperature produces a heat loss H. The equivalent temperature is that temperature that would compute the same heat loss at a wind of 3 knots. The accompanying chart, figure 22, shows equivalent wind chill temperatures in °C for various combinations of winds in knots or km/hr and temperatures.

Concepts in the following discussion of wind chill are from an appendix to an article by William J. Mills, Jr., M.D., as published in Alaska Medicine (1973). Dr. Mills is still active in the treatment of cold injuries in Alaska.

Almost everyone knows that the increased speed of wind may cause increased danger of skin freezing. Many assume that the increase in wind speed causes the ambient air temperature to fall lower. This is not so. What does occur is air movement, so that warmed air is moved away from the individual exposed to the wind, causing first local, then general body cooling. Any resultant decrease of skin temperature is due to heat loss, insidious or sudden. Local vasoconstriction, vascular shunting, and cellular changes take place; eventually ice forms in the tissues, with true tissue freezing or frostbite.

This phenomenon can be readily proved. Place a laboratory recording thermometer with a thermistor attached (or any outdoor thermometer) out your car window on a calm day when the temperature is, say, – 20 °C (– 4 °F)—just a nice winter day in Anchorage, Alaska. Let it sit for a few minutes until the temperature reading has stabilized. This temperature, as read, will remain at the ambient air temperature level. Now slowly accelerate your vehicle to 80 km/hr (50 mph); the temperature remains unchanged at – 20 °C (– 4 °F). Now attach the thermistor to your bare hand. Place your ungloved hand out the same car window in the same ambient temperature of – 20 °C (– 4 °F). After a few minutes at 0 km/hr, the skin temperature may be read at approximately 93 °F (normal skin temperature in the nonsmoker). Your skin temperature will drop as heat is lost to the exterior, sometimes falling as low as 85° to 80 °F very rapidly. As the car is accelerated and the warmed air layer is moved away, the thermistor records skin heat loss. If you continue driving, your skin temperature may drop to a level near 23 °F (– 5 °C), the temperature at which freezing of skin may actually occur.

Wind chill may occur not only from natural wind, but also with air movement generated by automobile, snowmobile, aircraft, or helicopter rotoblade. These vehicles may predispose passengers to frostbite or general hypothermia

Section II:
Marine and Coastal Climatic Atlas

by William A. Brower, Jr., Ronald G. Baldwin,
and Claude N. Williams, Jr.

Marine and Coastal Climatic Atlas — Section II

William A. Brower, Jr.
Ronald G. Baldwin
Claude N. Williams, Jr.

The marine observations used in computing the statistics for the maps, graphs, and tables in this section of the three-volume atlas were taken from the National Climatic Data Center's (NCDC) marine surface data files which include the Comprehensive Ocean Atmosphere Data Set (COADS). COADS is the result of a multiyear effort by NOAA and the National Center for Atmospheric Research (NCAR) to provide a quality-controlled marine data set which incorporates data from a variety of global sources for 1854-1979. Those files are: TD-1170 for COADS and TD-1129 for 1980-1985. Because relatively little data exist for near-coastal zones, observations from 66 U.S., Canadian, and Russian coastal stations were combined with the marine data in order to present the best possible climatological picture of the outer continental shelf waters and coastal regions of Alaska, and adjacent Canadian and Russian regions.

Data for the U.S. and Russian stations were taken from the edited digital files of NCDC and the U.S. Air Force's Environmental Technical Applications Center (ETAC) in Asheville, North Carolina. Digital data from the Canadian stations were purchased from the Canadian Climate Centre in Downsview, Ontario. All data were subjected to thorough computer and visual quality control in order to eliminate duplicate observations and exclude questionable elements detected during internal consistency and extreme value checks.

The percentages of the summarized 4.5 million marine and 8.5 million coastal station land observations that contain basic weather elements are:

	Marine	Coastal Stations
Wind	93.8	99.1
Visibility	79.5	97.5
Present weather	82.8	95.7
Total cloud amount	79.6	97.3
Low cloud amount	67.4	57.4
Sea level pressure	93.5	89.7
Air temperature	94.4	98.6
Wet bulb temperature	59.4	97.7
Sea surface temperature	85.6	—
Waves	65.4	—

The marine and coastal study area for which data were compiled and analyzed was expanded from 50°—80°N and 130°—180°W (in the 1977 atlas) to 40°—84°N and 110°W—160°E in order to afford greater coverage for each of the three atlas areas, with a minimum of overlap between areas. Element statistics (with observation counts) were generated for each of over 2,550 marine squares and 66 coastal stations within the study area, and then plotted by computer on monthly charts which have an albers equal-area conic projection. The marine plots were 1° latitude by 1° longitude squares for the latitude belt 40°—75°N and 1° by 2° areas for 75°—84°N. An analysis was performed on the entire marine and coastal study area in order to permit continuity between the three atlas areas. Meteorologists, aided by computer-drawn iscpleth contours south of 65°N, drew isopleths (lines connecting points of equal magnitude) on 420 monthly element maps, and made subjective adjustments to the analyses when data biases or insufficient observations were evident. They also performed consistency checks in the sets of monthly patterns for each element and among elements, as well as comparative checks with other marine atlases and publications (see Reference).

Although more than a four-fold number of marine data above 65°N was available for this presentation than for the same area in the 1977 atlas, the amount remained inadequate to permit a detailed isopleth analysis by meteorologists or by computer-contouring routines. This was especially true for the cooler months when seasonal sea ice prevented ships of opportunity from frequenting the area. Isopleth analyses for the Chukchi-Beaufort Sea area, by necessity, were based principally on the plotted coastal stations' statistics, extrapolations of weather patterns identified in isopleth analyses for the warmer months, the period of greater data availability, and other marine and continental atlases and publications.

To supplement the isopleth analyses, nearly 16,750 monthly statistical graphs, tables, and roses were produced for 50 of the 66 land stations, 16 representative marine areas, and 43 5° by 5° marine areas. The graphics represent the objective compilation of all available data; they were not adjusted for suspected biases, and differences may be found when comparing the graphics data with the isopleth analyses.

For each topic set, all months are grouped in calendar order with one or two pages preceding each set containing the legend and narrative for that set. The legends contain detailed instructions on how to read the graphics and provide remarks which aid in interpreting the data. The following paragraphs contain additional remarks which are likely to be of interest to those called upon to interpret the data and provide answers to specific operational questions. The table on page II-4 describes the data and marine areas for this volume.

A word of caution. The intent of this atlas presentation was to gather and present existing data on climatological conditions within the marine and near coastal areas of Alaska and adjacent Canada and Russia. The data are presented without discussion and interpretations. Given the information presented in the introductory text, legend descriptions with related text, and number of observations (with measures of variability for some) displayed with the graphics presentations, the user should be able to assess the degree of statistical confidence in the presented climatology for a given month and location.

Standard Deviation

Some of the graphs display approximation of the empirical probability of occurrence of selected criteria. This is a major factor in assessing the risk involved in operational planning. For certain elements, unbiased estimates of population standard deviations are given on the graphs to provide a measure of variability. The standard deviation was computed using the expression:

$$s = \left[\frac{N\Sigma x_i^2 - [\Sigma x_i]^2}{N(N-1)}\right]^{1/2}$$

where N is the number of observations in the sample and x_i is the ith realization of the random variable x.

Sea Ice

The ice isopleths presented in Sets 17-19 give the percent probability of finding ice of any kind, ice concentration of one-half coverage or more, and ice thickness of eight feet or more, within the Alaska study area. Actual concentration boundaries, under the influence of changing synoptic meteorological and oceanographic

situations, may vary widely from the averages. An isopleth label, therefore, does not explicitly define the conditions on either side of the line since presence of sea ice is discontinuous in nature and regions of 80% mean ice concentration may be bordering regions of 20% ice concentrations with no intermediate region of 50% ice concentration. However, the inherent continuity of persistence of sea ice features permit an isopleth presentation to provide meaningful information.

The sea ice data were derived from digitized weekly analyses of sea ice conditions based primarily on satellite imagery (90%) supplemented by ship and shore reports, and aerial reconnaissance. These weekly polar sea ice analyses have been operationally produced by the U.S. Navy/NOAA Joint Ice Center (JIC) since 1972. In 1981, JIC initiated a Sea Ice Digitization Program to digitize the weekly polar ice maps as they become available. NCDC was funded by the U.S. Navy to design software and digitize all weekly ice concentration charts available since 1972 and ice thickness charts available since 1980, and produce polar ice atlases based on data through 1982. The Antarctic Ice Atlas was published in 1985, and the Arctic West and the Arctic East Alases in 1986 (U.S. Navy 1986). The U.S. Navy also funded NCDC to accelerate the digitization of the West Arctic weekly charts through 1985 and produce the ice statistics presented in this atlas.

Low Pressure Center Movement

The roses and tracks of the low pressure center movement maps presented in Set 22 are based on 20 years of Northern Hemisphere track charts (January 1966 - December 1985) prepared by the National Weather Service's National Meteorological Center. These charts show cyclone tracks based on 6-hourly positions of closed centers. The NCDC was funded by the U.S. Navy to develop the software and digitize some 240 monthly cyclone track charts to permit inclusion of the statistics in this atlas. Frequencies of cyclone centers passing through 5° squares were analyzed by meteorologists within the 35°—80°N, 115°W—160°E area of the North Pacific Ocean to obtain the mean tracks. Primary tracks were selected along axes of maximum cyclone center frequency and secondary tracks along axes of moderate frequency.

Persistence of Wind and Waves

Duration and interval tables are presented in Set 23 for wind speed and wave height. Seasonal and annual tables contain objective compilations for 23 grid points in the Gulf of Alaska and Bering Sea. The statistics are based on numerically-derived wind and wave data generated by NCDC using the Hindcast Spectral Ocean Wave Model (SOWM), developed by Dr. Willard J. Pierson and others, in producing U.S. Navy's SOWM Climatic Atlases for the North Pacific and North Atlantic Oceans (U.S. Navy 1985). No SOWM data were available to produce persistence statistics for grid points within the Beaufort Sea (Vol. III) area.

Episodes of durations (continuous hours or days) of events and episodes of intervals (continuous hours or days) between events were tallied for various thresholds. These tables give an indication of how long an episode is likely to last once it has begun. For convenience, the time an episode persisted above a given threshold is arbitrarily referred to as a "duration" of the event. The times between episodes have been termed "intervals." Data were summarized on a seasonal and annual basis because 12.5 years of hindcast data were considered too small a sample to provide representative durations and intervals for long episodes of wind and wave conditions on a monthly basis. The winter season is January-March; spring, April-June; summer, July-September; and autumn, October-December (World Meteorological Organization, 1981).

Return Periods for Maximum Winds and Waves

Tables of estimated maximum sustained wind speeds and wave heights for selected return periods are presented in Set 24 (Set 23 for Volume III).Estimates for winds are presented for 50 coastal stations within the 3-volume area and for 23 marine grid points within the Gulf of Alaska and Bering Sea areas (Vols. I and II). Hourly wind observations for the stations and numerically-derived wind and wave data generated by Pierson's Spectral Ocean Wave Model (SOWM) for the marine grid points were used in determining the wind and wave extreme estimates. No SOWM data were available for the Beaufort Sea (Vol. III) area. Following the method outlined by Lieblein (1954, 1974a, 1974b), these estimates were obtained by initially fitting an extreme value distribution to each station and marine grid point sample containing N maximum monthly or annual wind speed or wave height values, then inverting the distribution and computing extreme values for selected probabilities. Confidence bands were then computed following the techniques of Gumbel (1958), and Gumbel and Lieblein (1954).

The extreme value distribution has the form:

$$F(x) = F(x{:}\mu,\beta] = \exp\left[-\exp\left(-\frac{x-\mu}{\beta}\right)\right]$$

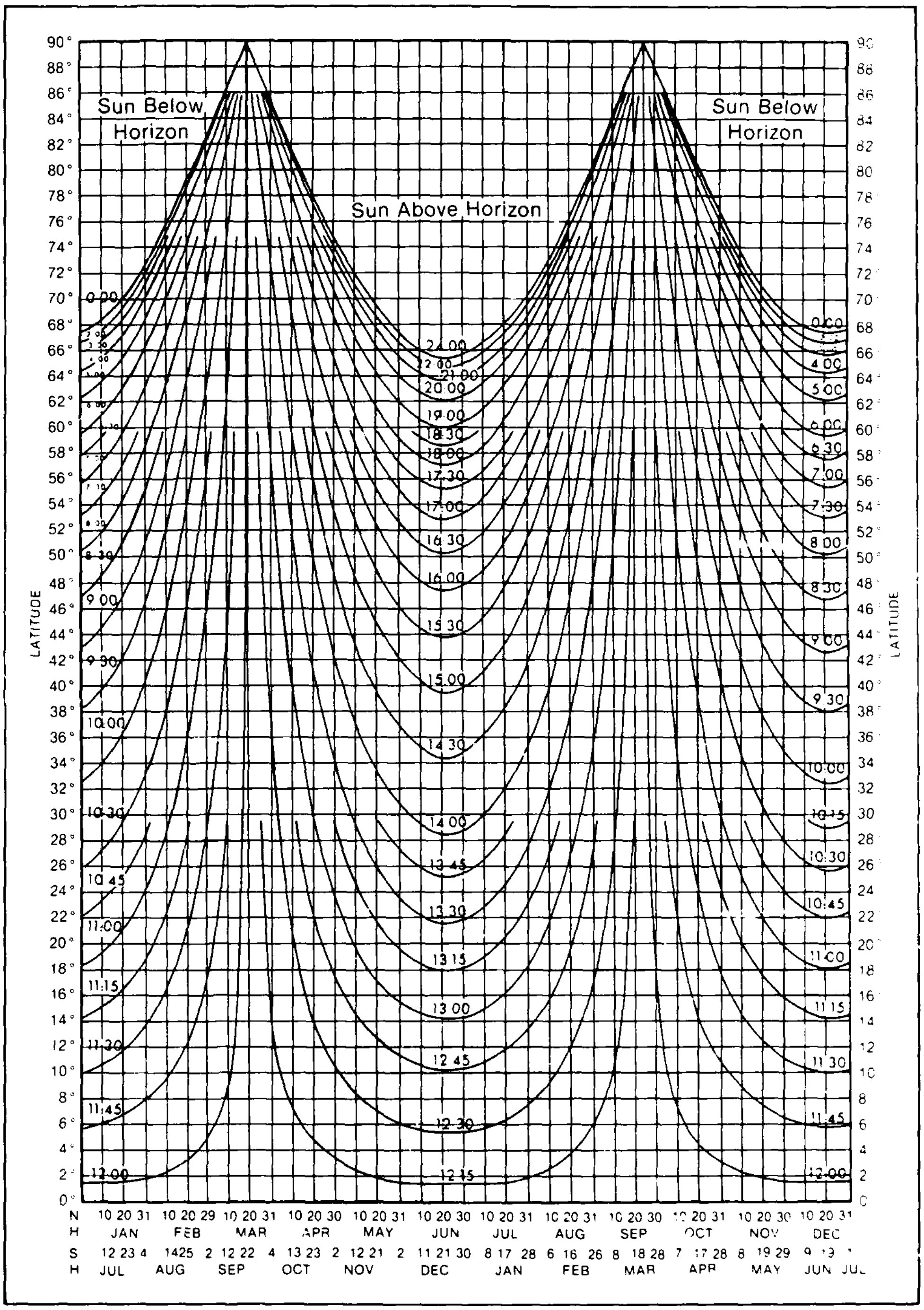
where F(x) is the probability that our observations are equal to or less than the specified value x, μ is the mode, and β is the scale parameter. Since the wind data were transformed logarithmically, μ and β refer to the transformed data, not to the wind maxima. The values given in the tables of Set 24 are the result of applying the natural logarithms of the N annual extreme wind to the extreme value model, determining the μ and β for each data set, and them exponentiating the logarithms of the estimates to give the probability estimates in knots. The wave data were not transformed logarithmically and, therefore, μ and β are in feet.

Graphic presentations similar to Figure 1 of Set 24 were drawn for each month and for the annual values, and are available on microfiche at the NCDC. The year/month extreme data for each station and marine grid point are also available on magnetic tape. These presentations provide a visual indication of the "goodness of fit" of the model to the data. The confidence limits shown by the envelope of lines about the line of "best fit" represent the level of uncertainty in the extreme value estimate corresponding to a given probability. For this study, 68% confidence limits were computed. This means that in 68% of repeated samples, the true extreme value will be contained within these limits.

Duration of Daylight

The duration-of-daylight chart for the Northern Hemisphere defines daylight as the period from sunrise to sunset. The upper scale at the bottom of the chart is for the Northern Hemisphere; the lower scale is for the Southern Hemisphere. For example, daylight on July 20 of any year at 48°N is about 15 hours and 30 minutes for any longitude. The data source was the U.S. Naval Observatory (1945) and is accurate for the entire twentieth century. Further details may be obtained from *The Daylighter* of the Navy Weather Research Facility (1960). Additional light (during twilight) may be usable for many purposes. Duration of daylight in high latitudes (poleward of about 60°) becomes increasingly dependent upon atmospheric conditions and refraction, and there may be some departure from the values depicted on the charts.

Figure 23. Duration of Daylight



Volume III

The following stations and representative marine areas have data plotted for analysis and graphics.

Land Stations	Lat.(°N)	Long.(°W)	Data Processed	No. of Obs.	No. of Obs./Day
Barrow	71.3	156.8	Jul 1948-Apr 1985	221,998	8-24
Barter	70.1	143.6	Jan 1949-Apr 1985	215,560	8-24
Buhta Ambarchik*	69.6	162.3E	Jan 1959-Dec 1963; + Jan 1969-Apr 1985 +	35,323	8
Cape Billingsa*	69.9	176.1E	Jan 1959-Dec 1963; Jan 1969-Apr 1985 +	32,418	8
Cape Lisburne	68.9	166.1	Aug 1952-Dec 1971; Jan 1973-Apr 1985	246,746	19-24
Cape Parry	70.2	124.7	Jan 1956-Dec 1983	231,514	8-24
Cape Young*	68.9	116.9	Jan 1953-Oct 1967	9,873	2
Cetyrehstolbovoj*	70.6	162.4E	Jan 1959-Dec 1968; Jan 1973-Apr 1985	48,062	8
Clinton Point	69.6	120.8	Jan 1973-Dec 1983	53,551	4-24
Holman	70.7	117.8	Jan 1958-Dec 1983	51,523	4-24
Komakuk Beach*	69.6	140.2	Aug 1973-Dec 1983	17,185	4-8
Kotzebue	66.9	162.6	Jan 1945-Apr 1985	255,392	8-24
Lonely	70.9	153.2	Jul 1957-Apr 1985	40,243	4
Mould Bay	76.2	119.3	Jan 1953-Dec 1983	133,752	8-24
Mys Shmidta	68.9	179.5	Jan 1959-Apr 1985 +	55,146	8
Mys Uelen	66.2	169.8	Jan 1959-Apr 1985 +	55,053	8
Nicholson*	69.9	129.0	Aug 1973-Dec 1983	17,123	4-8
Oliktok	70.5	149.9	Aug 1957-Apr 1985	38,955	4
Ostrov Kolychino	67.5	174.6	Jan 1959-Dec 1963; Jan 1969-Apr 1985 +	33,418	8
Ostrov Ratmanova*	65.8	169.1	Jan 1959-Dec 1963; Jan 1969-Sep 1984 +	13,838	4
Ostrov Vrangelja	71.0	178.5	Jan 1959-Dec 1968; Apr 1970-Apr 1985 +	51,312	4-8
Point Lay	69.7	163.0	Aug 1957-Apr 1985	38,643	4
Sachs Harbour	72.0	125.3	Nov 1955-Dec 1983	129,276	8-24
Shingle Point*	68.9	137.3	Aug 1973-Dec 1983	17,155	4-8
Tin City	65.6	167.9	May 1953-Dec 1971; Jan 1973-Apr 1985	246,842	19-24
Tuktoyaktuk	69.5	133.0	Jan 1958-Dec 1983	38,032	4
Valkarkay*	70.1	171.0E	Jan 1959-Dec 1968; Jan 1973-Apr 1985	35,460	8
Zaliv Kresta*	66.4	179.1	Jan 1960-Apr 1985 +	54,124	8

+ Period excludes Jul 1971-Dec 1972.
*Stations used for isopleth analyses only; no graphics produced.

Representative Marine Areas	Lat.(°N)	Long.(°W)	Data Processed	No. of Obs.
A	70-75	164W-176E	1878-1984	9,403
B	70-75	144-164	1916-1984	24,845
C	Coast-75	124-144	1950-1984	32,883
D	65-70	Coast-Coast	1878-1984	11,925

Map 1. Precipitation

BLACK LINE – Percent frequency of observations reporting precipitation.

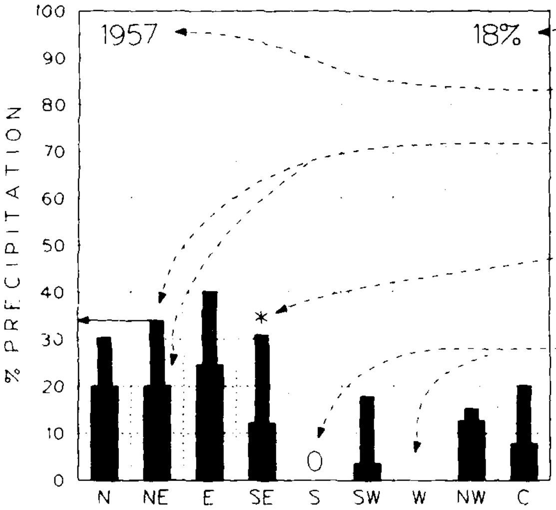
BLUE LINE – Percent frequency of precipitation observations reporting frozen precipitation.

Albers Equal–Area Conic Projection

Graphs: Precipitation/wind direction

% Pcpn. { % Liquid
% Frozen

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid (including freezing rain and freezing drizzle) and frozen precipitation.



Percentage of present weather observations reporting precipitation.

Number of observations.

(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was frozen precipitation.)

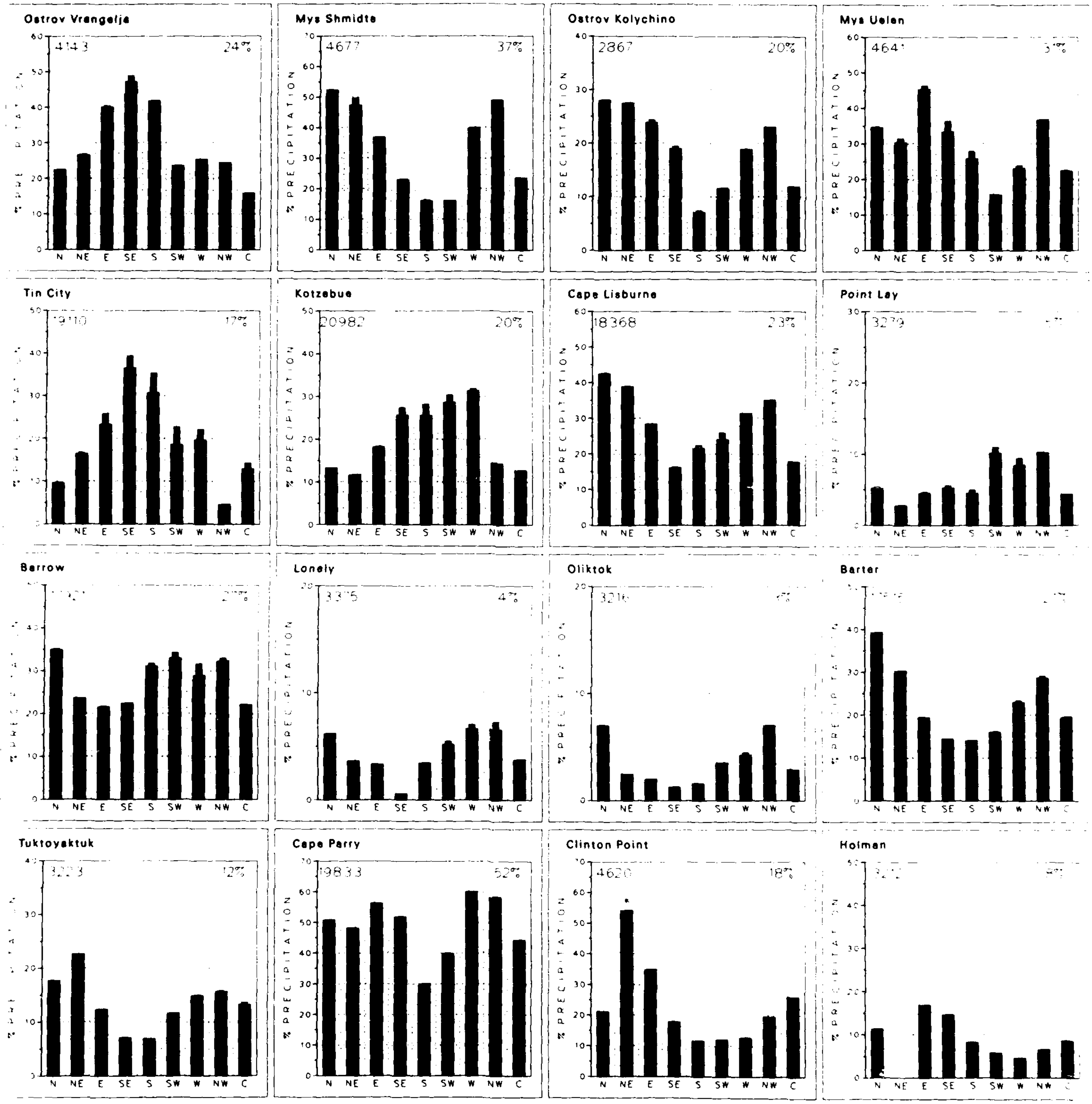
An asterisk in the column for a given direction (or calm) indicates percentages were based on 10-30 observations of present weather and wind direction.

0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather are reported for a given direction (or calm).

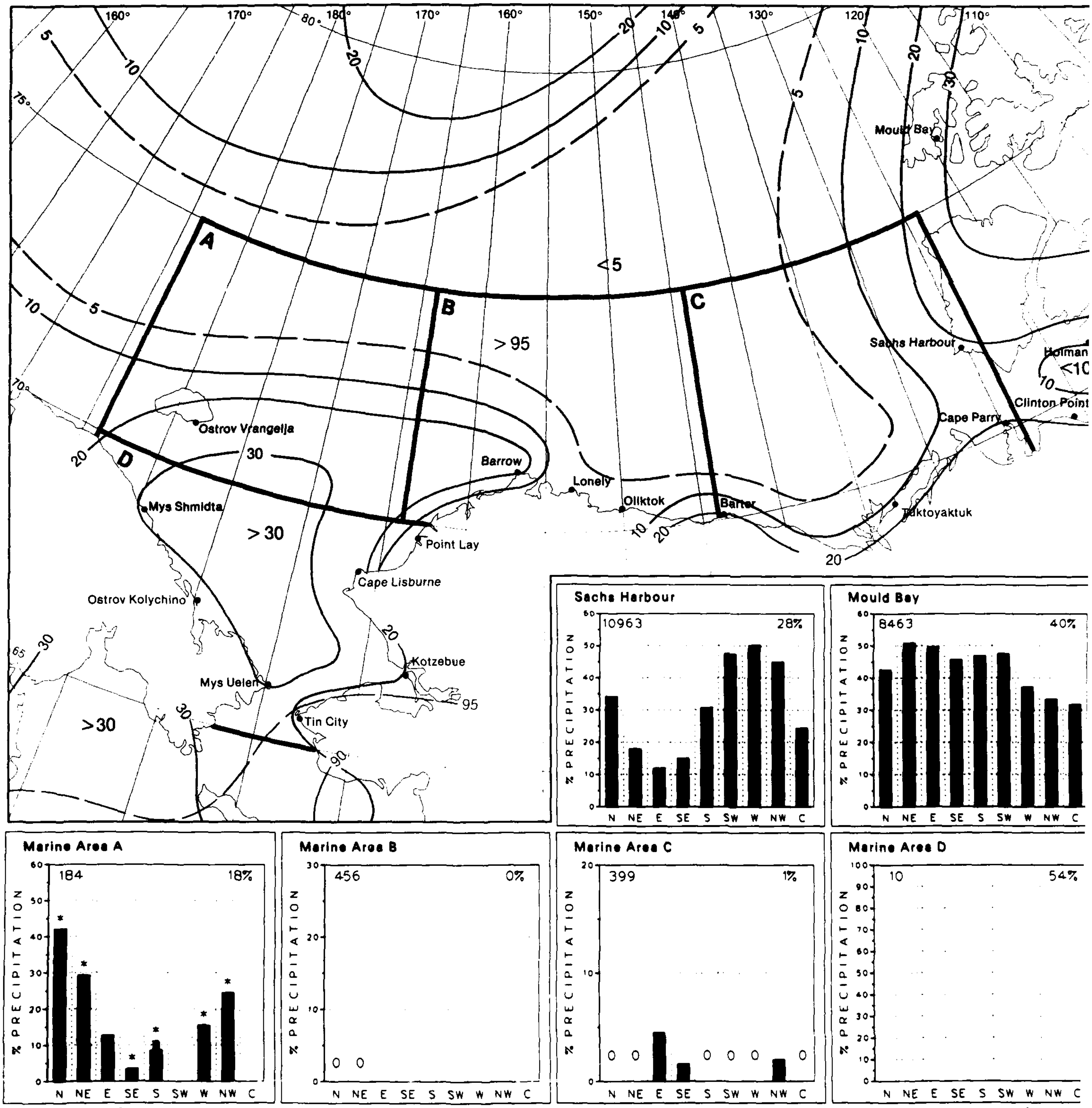
The percent frequency of observations reporting frozen precipitation for a given point on a monthly isopleth map can be determined by multiplying the percent frequency of observations reporting precipitation (BLACK LINE) with that of precipitation observations reporting frozen precipitation (BLUE LINE).

Of the elements recorded in the historical marine data base, precipitation is one that is most subject to error in both the wa it is observed and the way it is interpreted. It is often implied in the literature that ships often try to avoid foul weather an thereby bias the oceanic climatology towards fair weather. A recent study by Elms (1986), in which he compared the Voluntee Observing Ship (VOS) data to Ocean Station Vessel (OSV) and buoy data, concluded there is little evidence that "fair weathe bias" is a serious problem for most applications of marine climatic data.

Assessing oceanic rainfall data is a major problem because transit ships are unable to take quantitative precipitatio measurements. A number of studies have been conducted in efforts to predict precipitation amounts, or rates of fall, based c estimates derived from the use of present weather observations from ships of opportunity (Goroch, et al., 1984) and reading from satellites (Rao, et al., 1976). Refer to the text and table in Set 2 for additional information about precipitation.

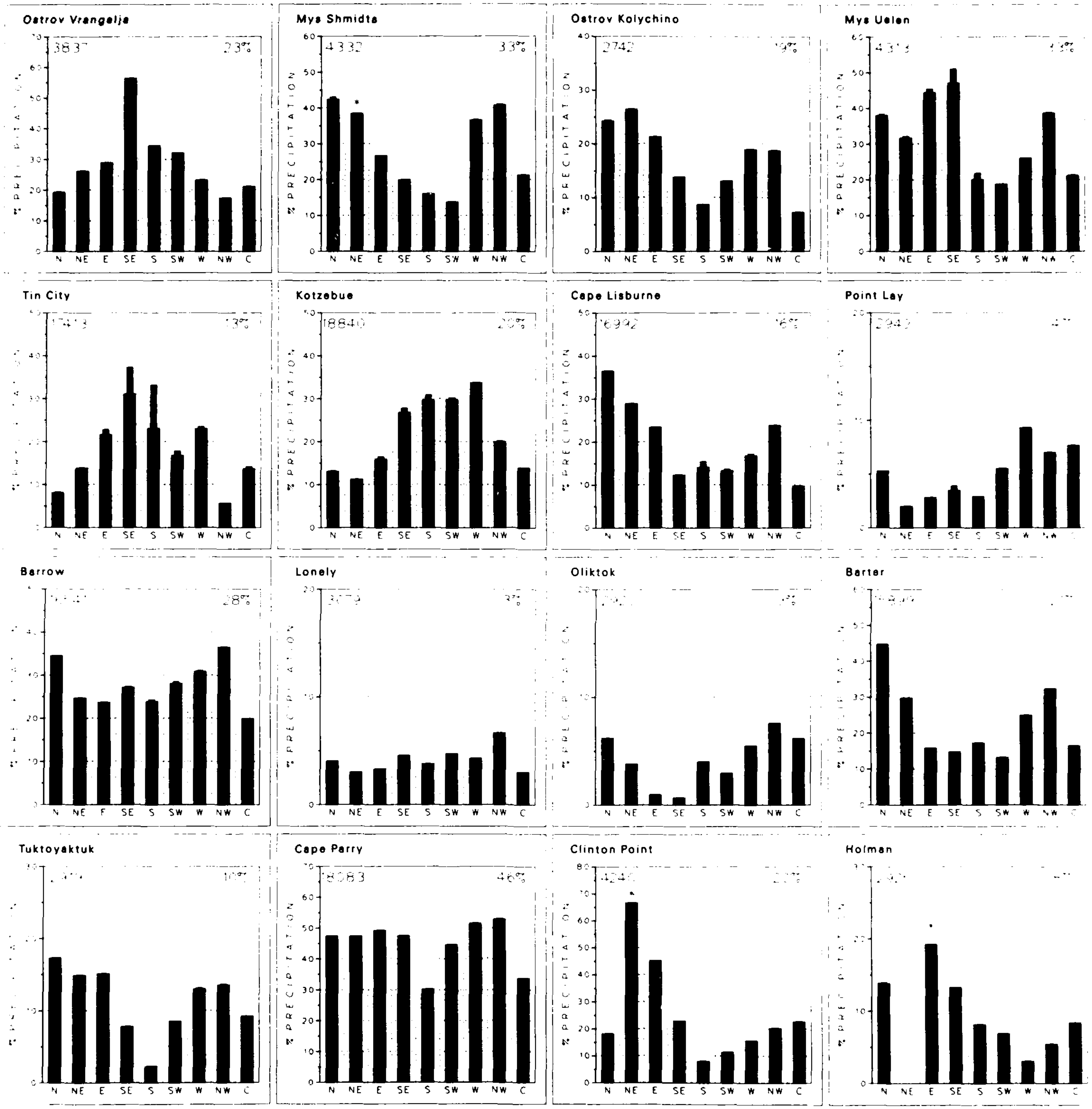


January 1 Precipitation and Wind Directio



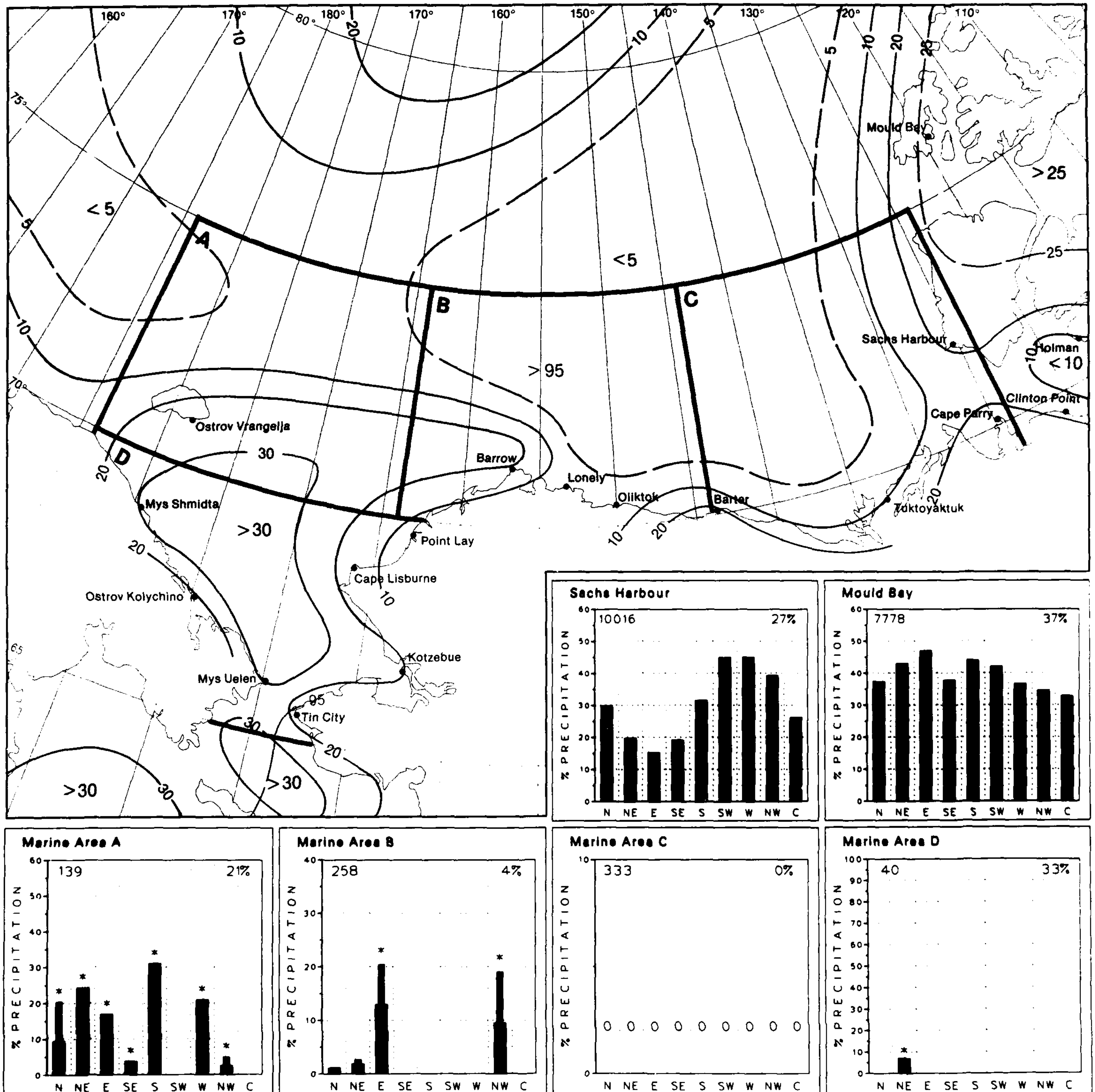
1 Precipitation

Janua



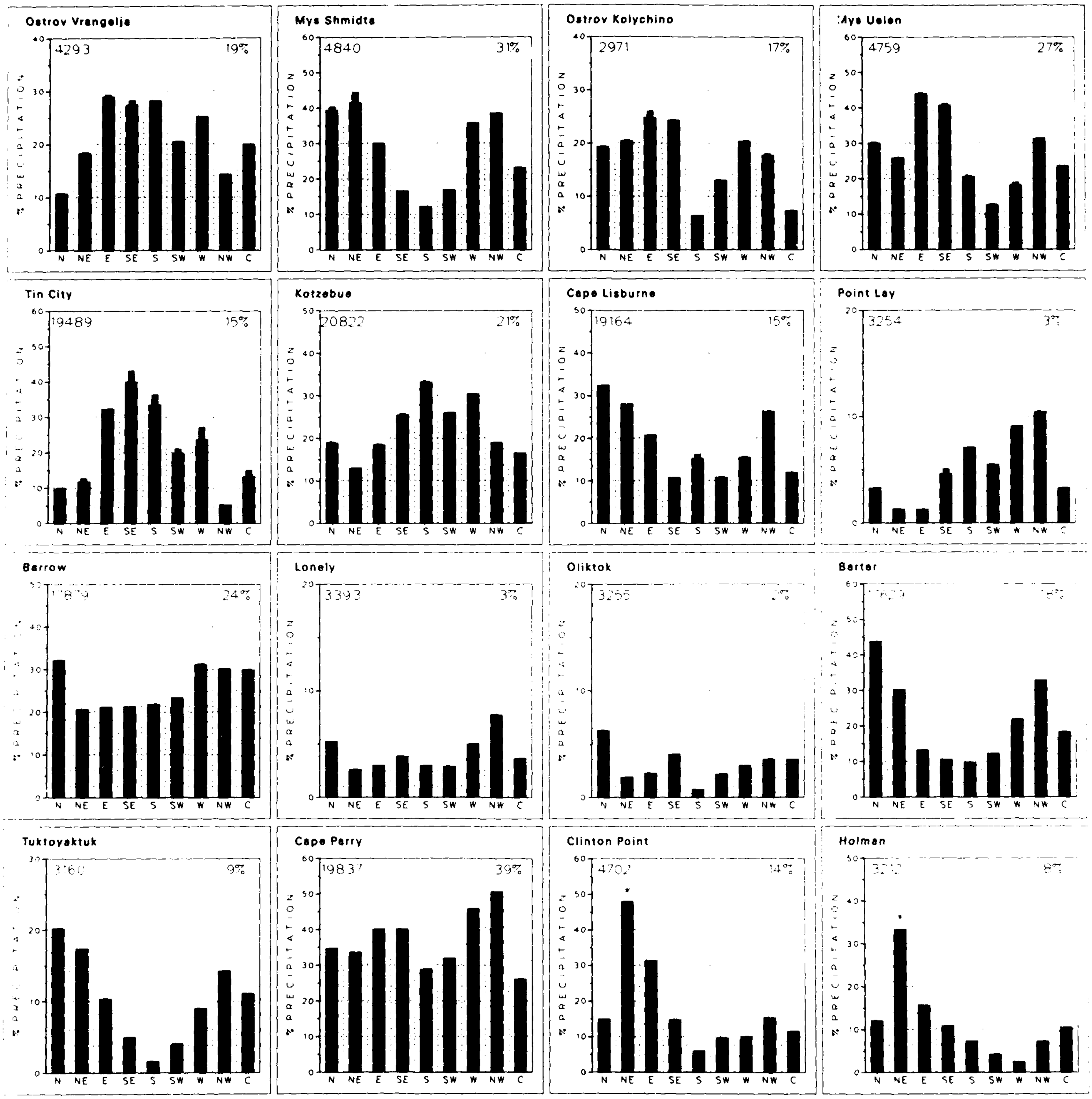
February

1 Precipitation and Wind Direction



1 Precipitation

February



March

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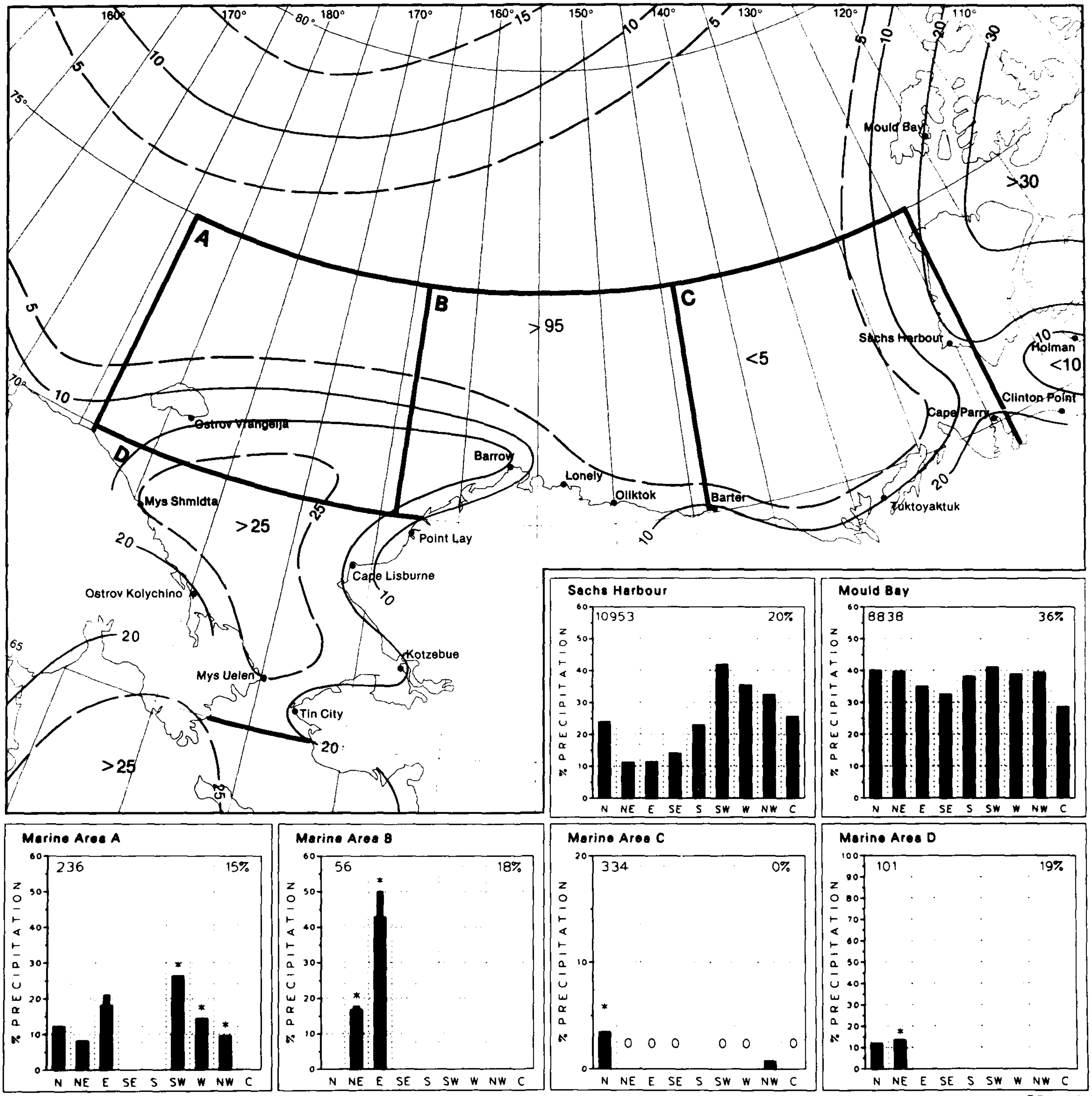
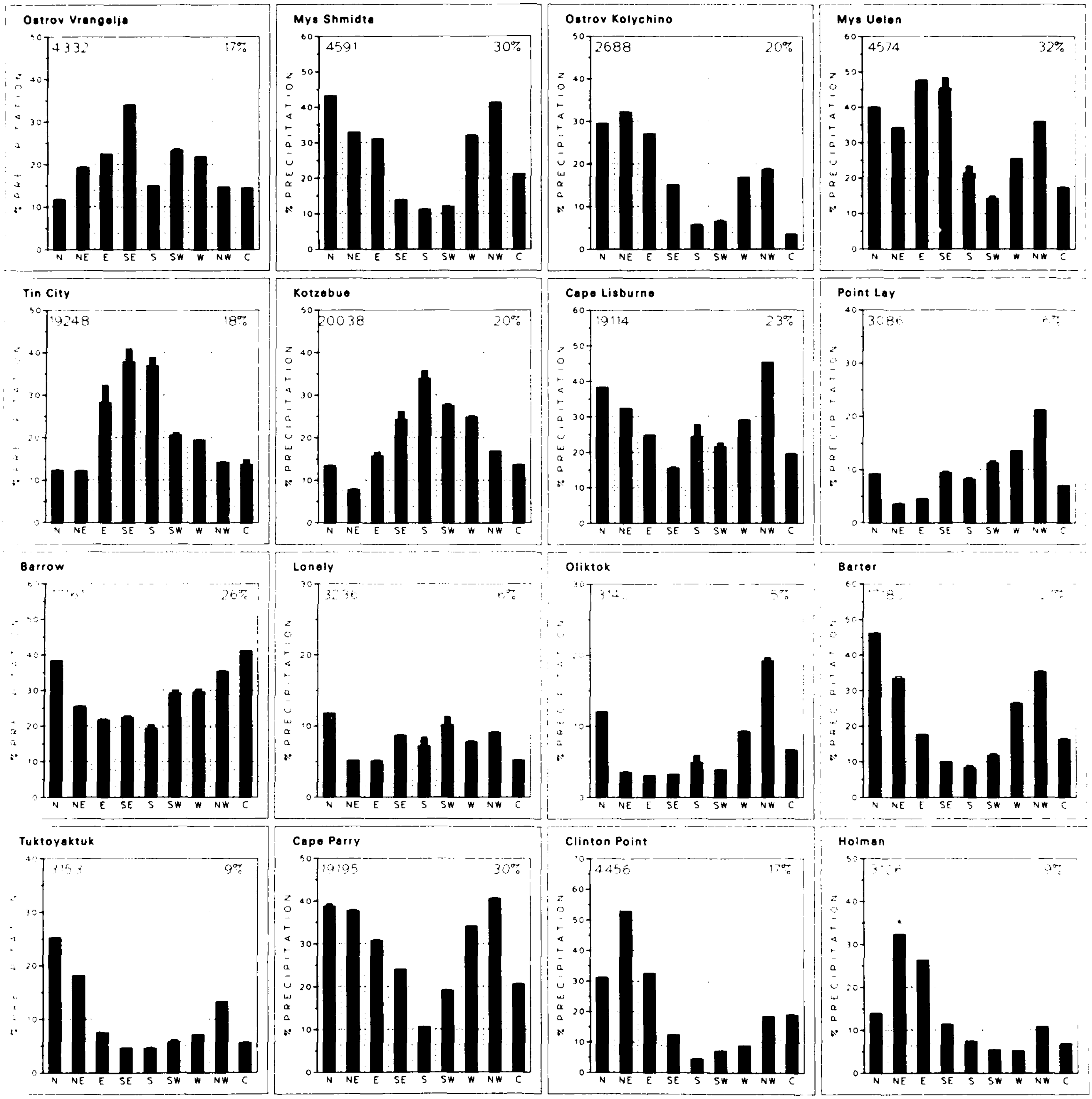


1 Precipitation

March



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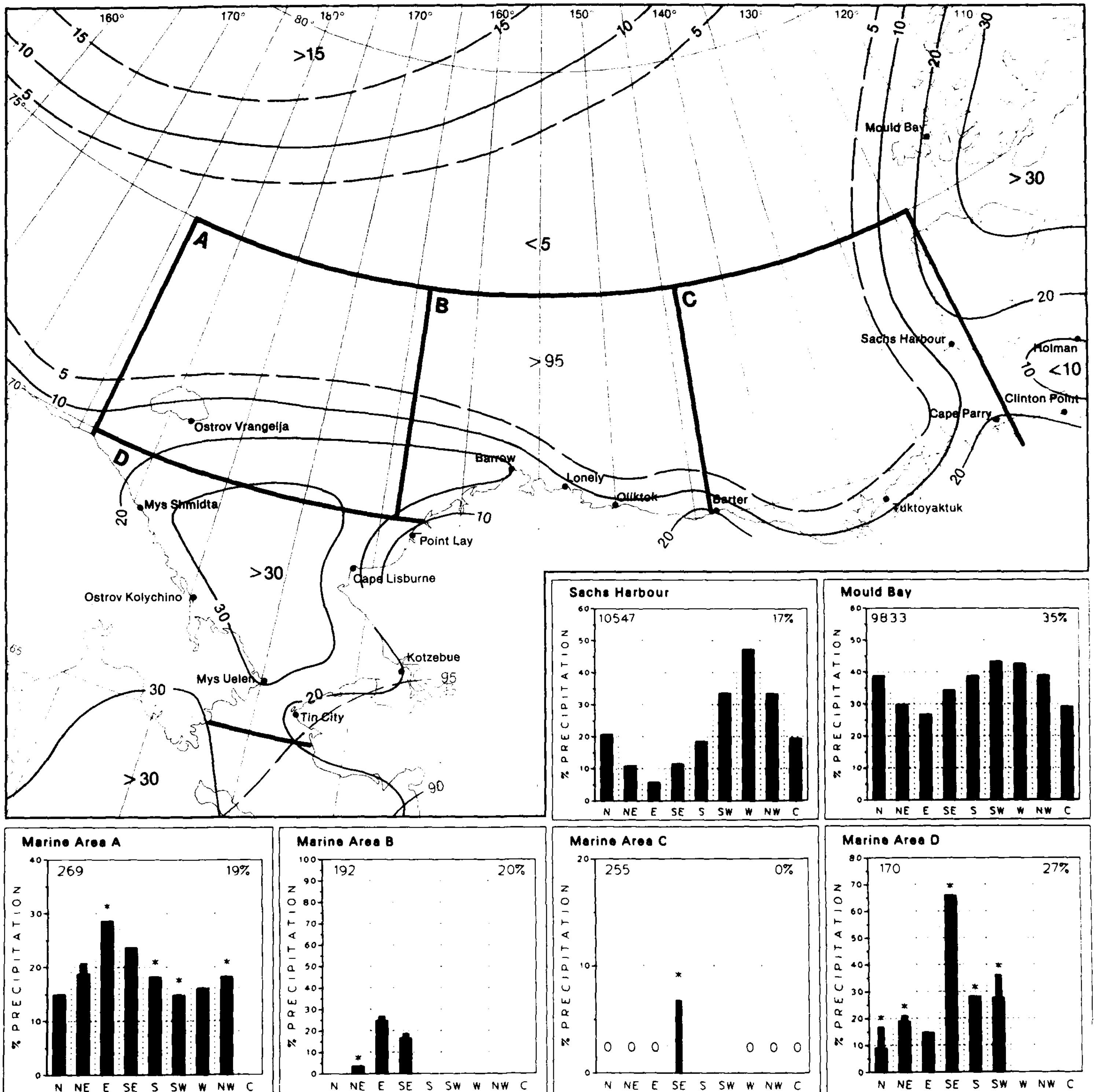
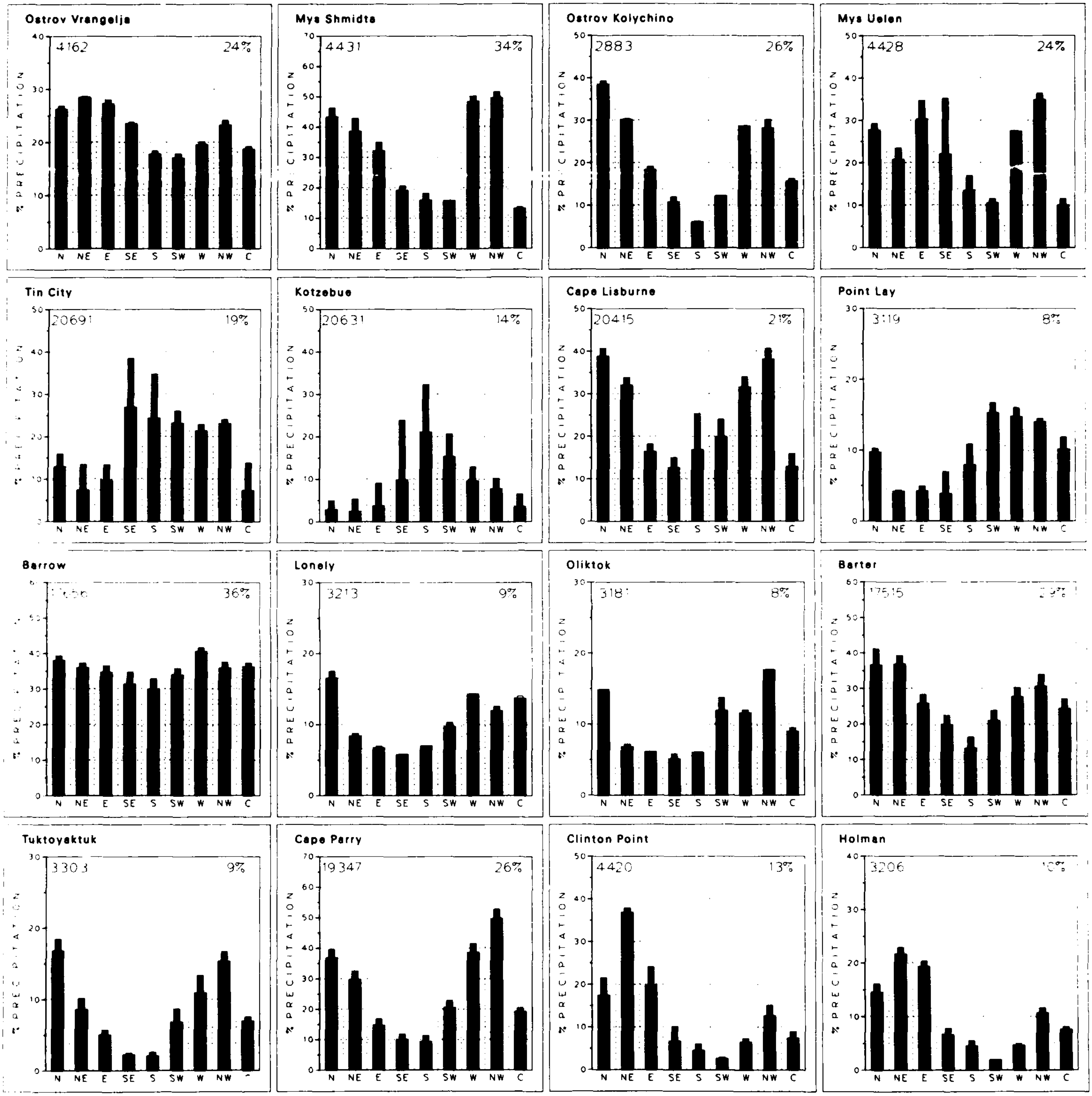


1 Precipitation

April



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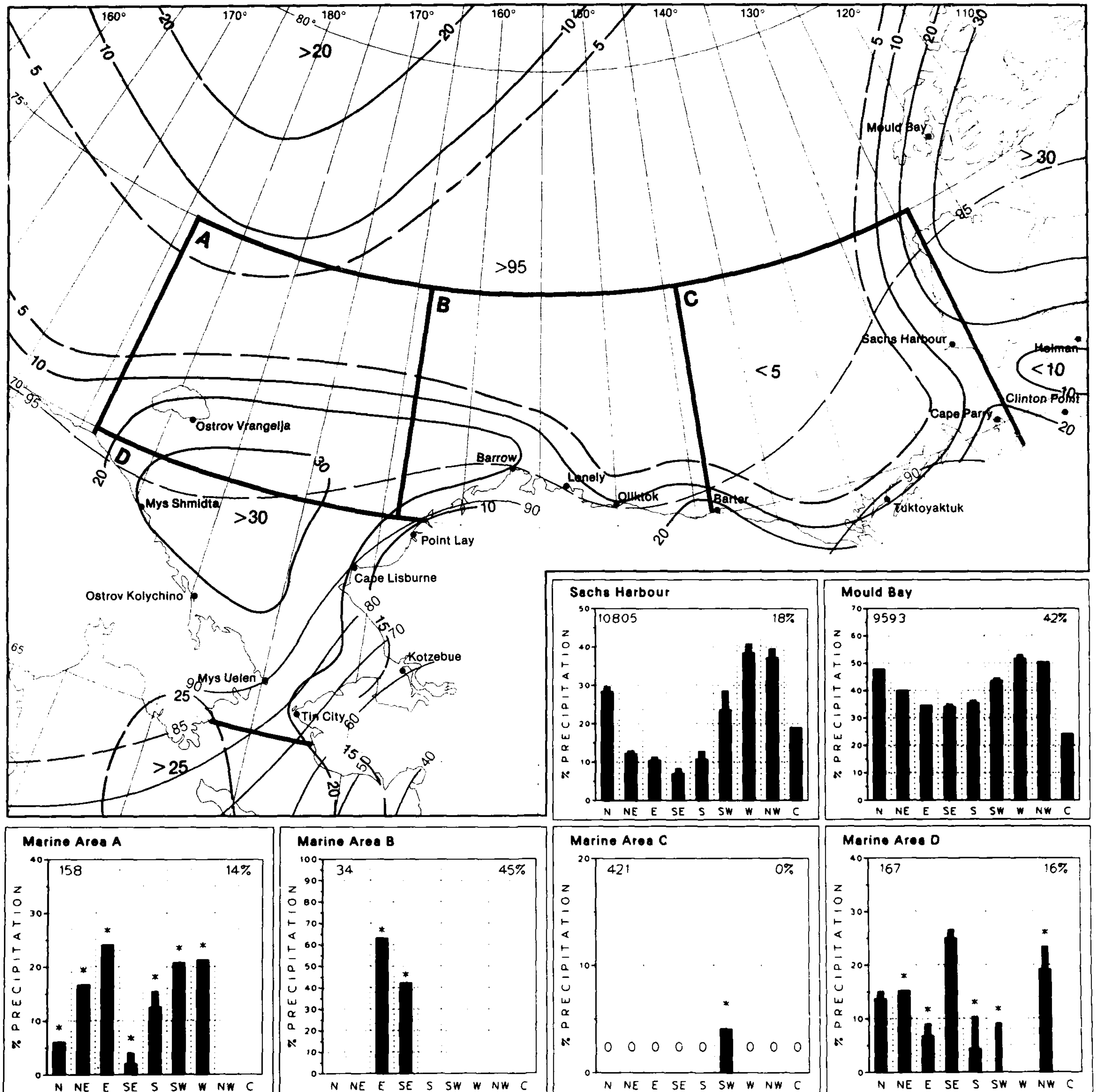
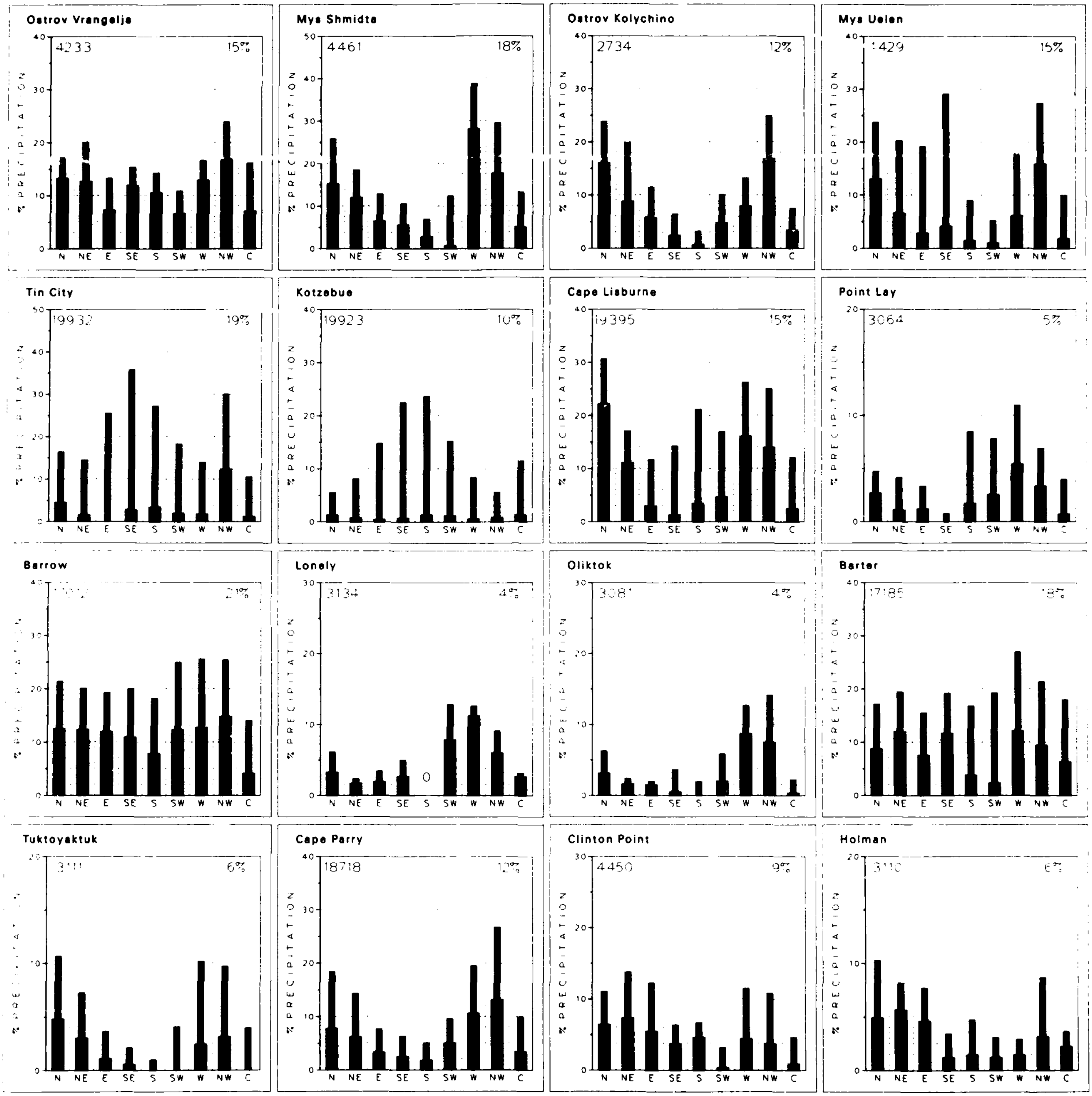


1 Precipitation

May



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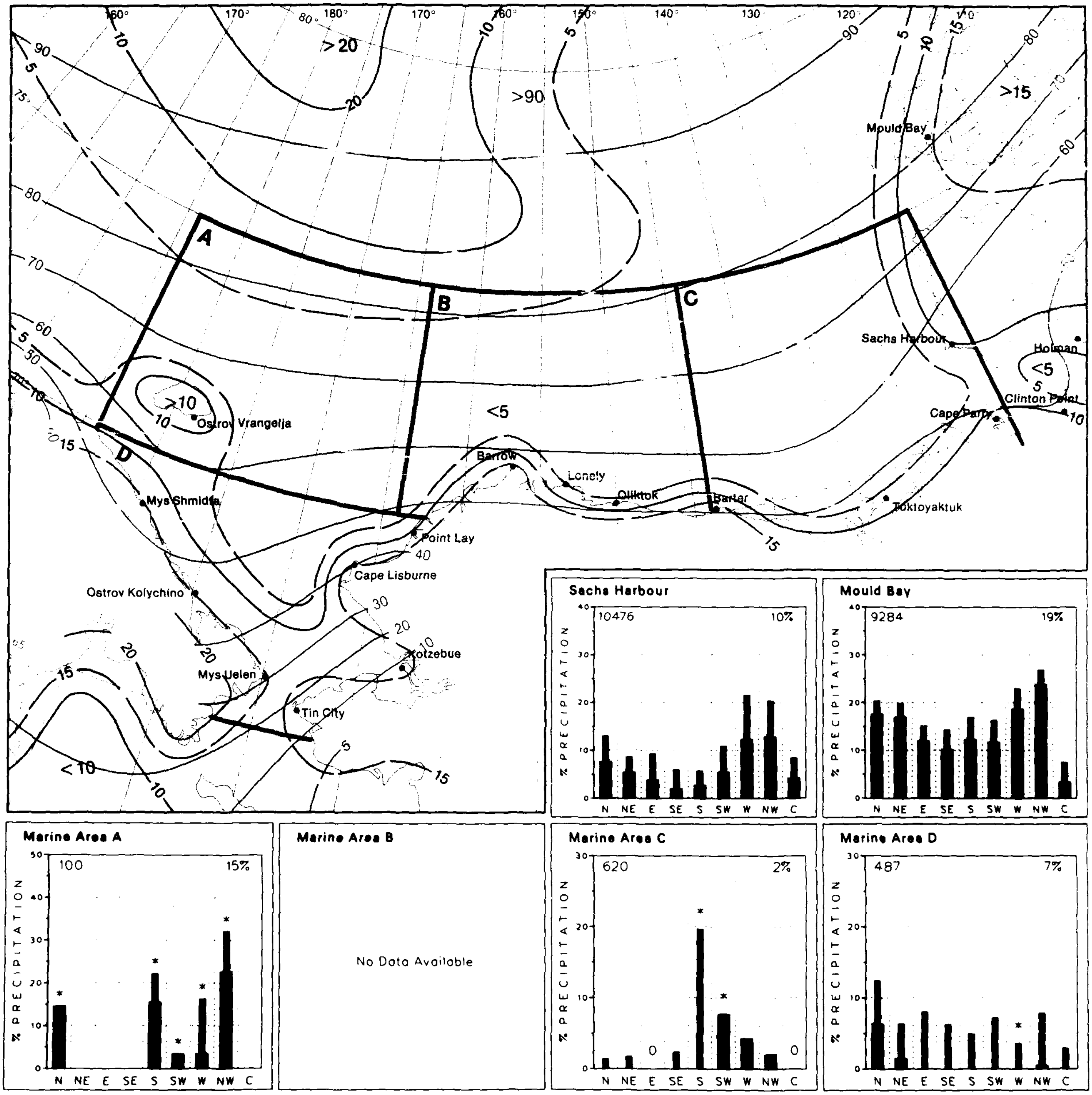
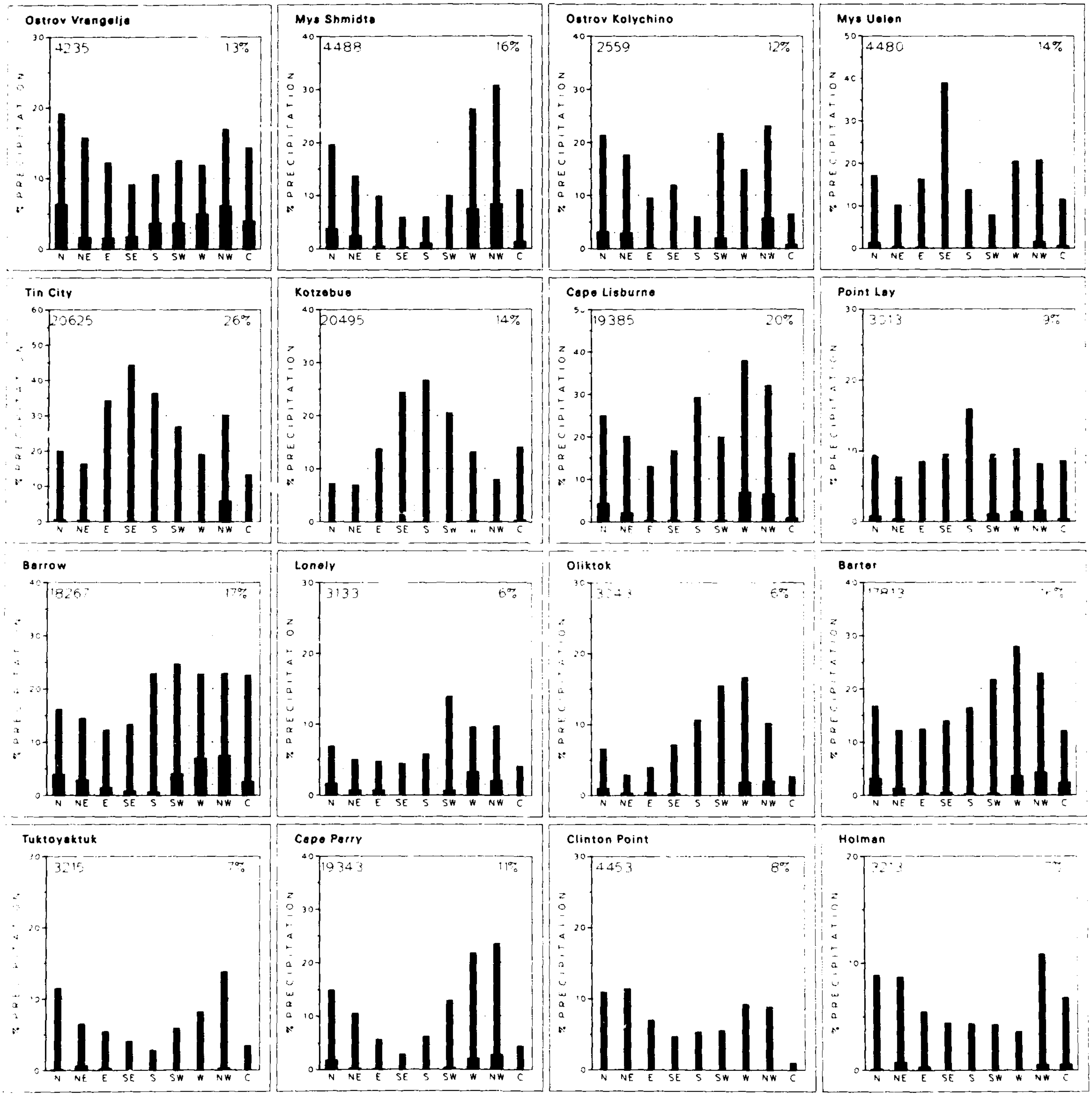


1 Precipitation

June



July

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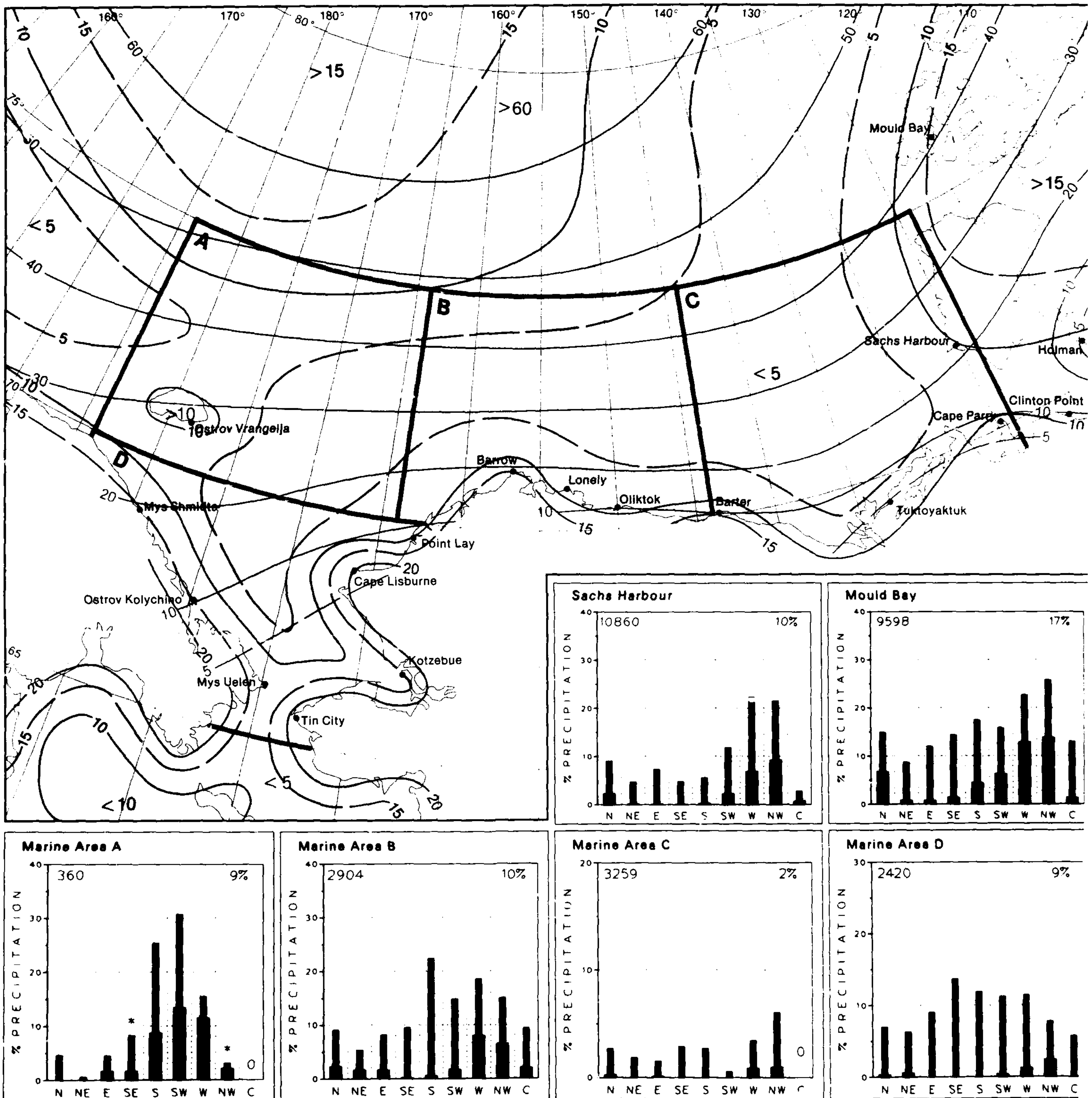
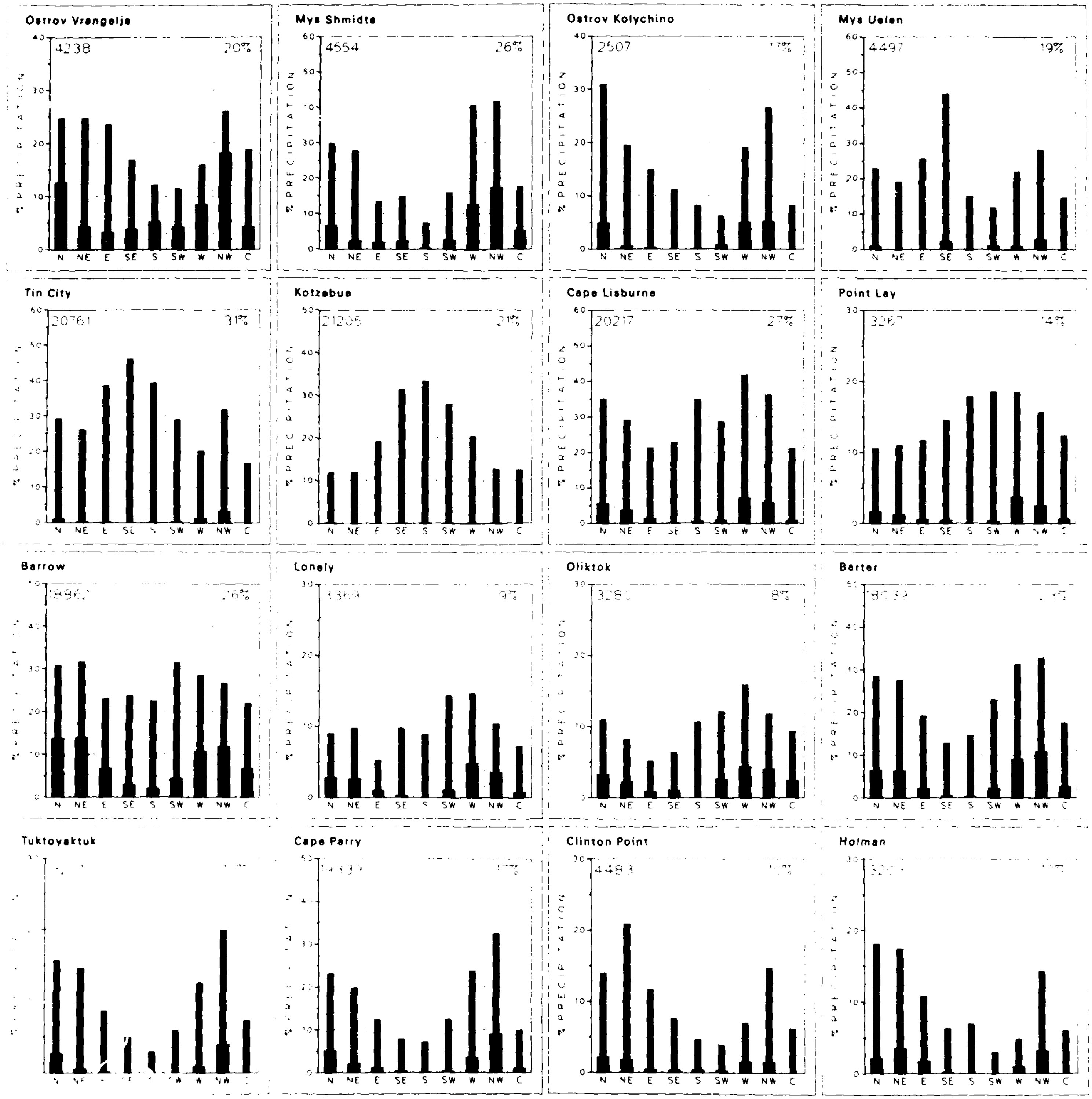
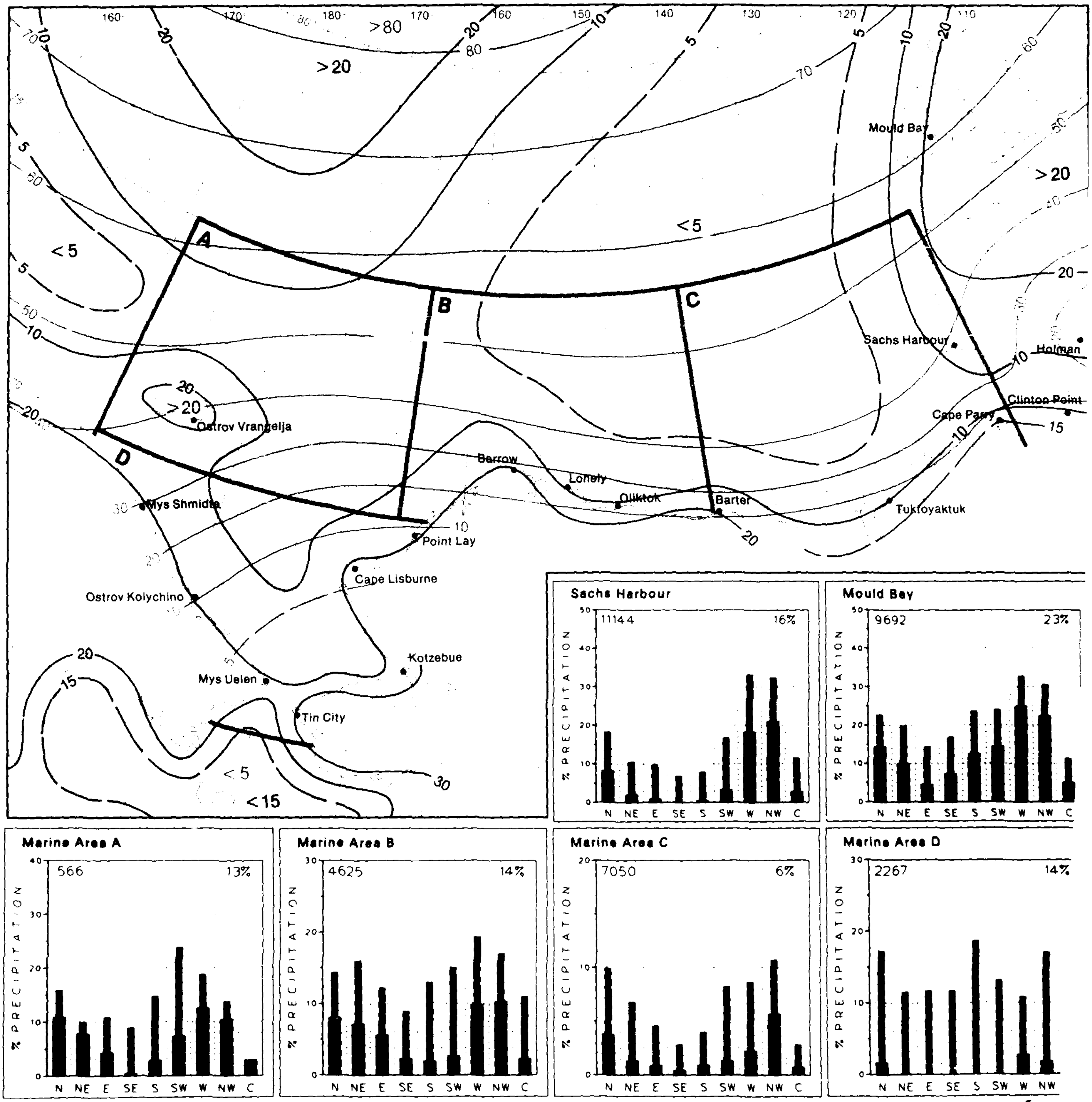


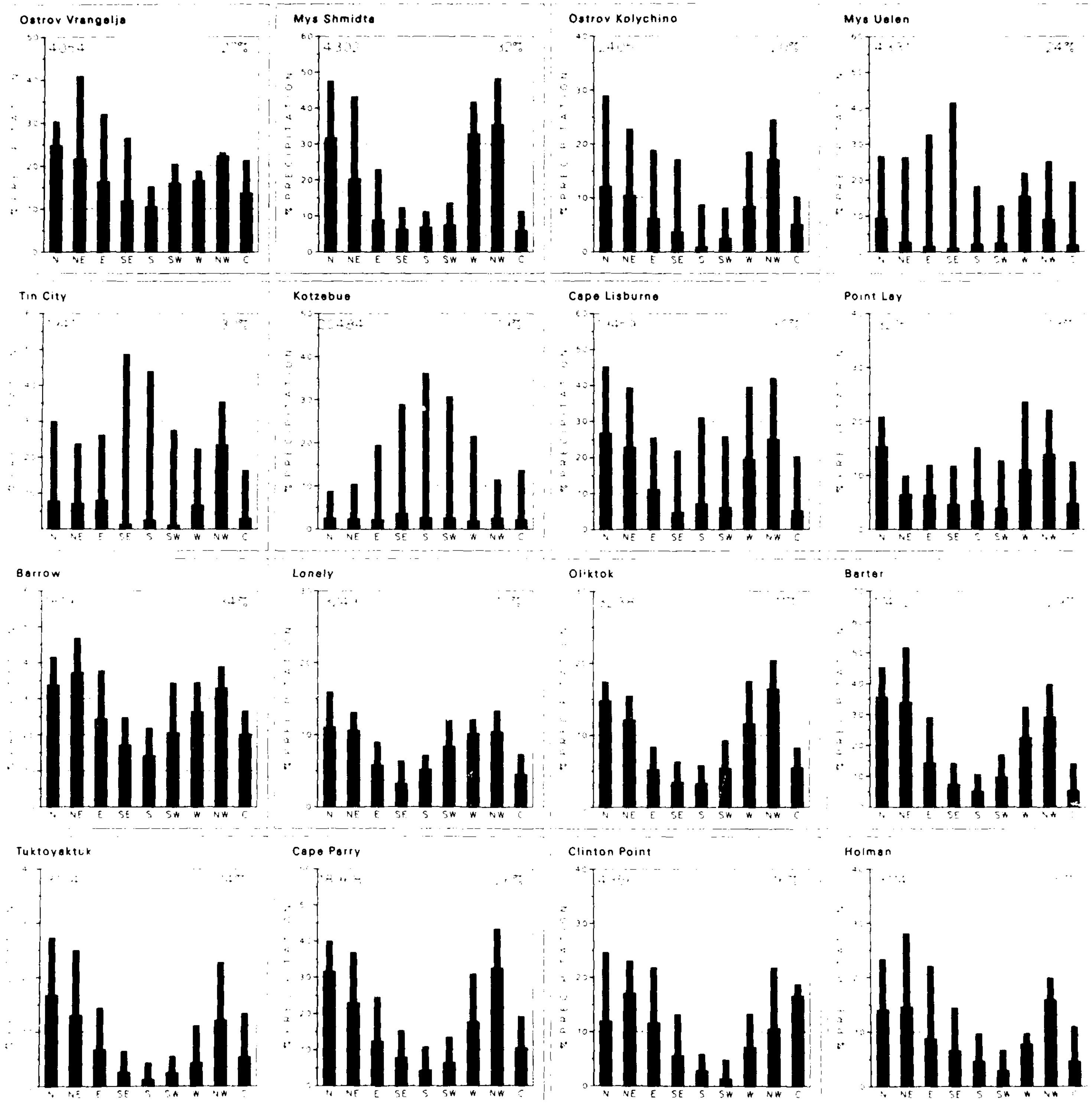
1 Precipitation



August **1 Precipitation and Wind Direction**

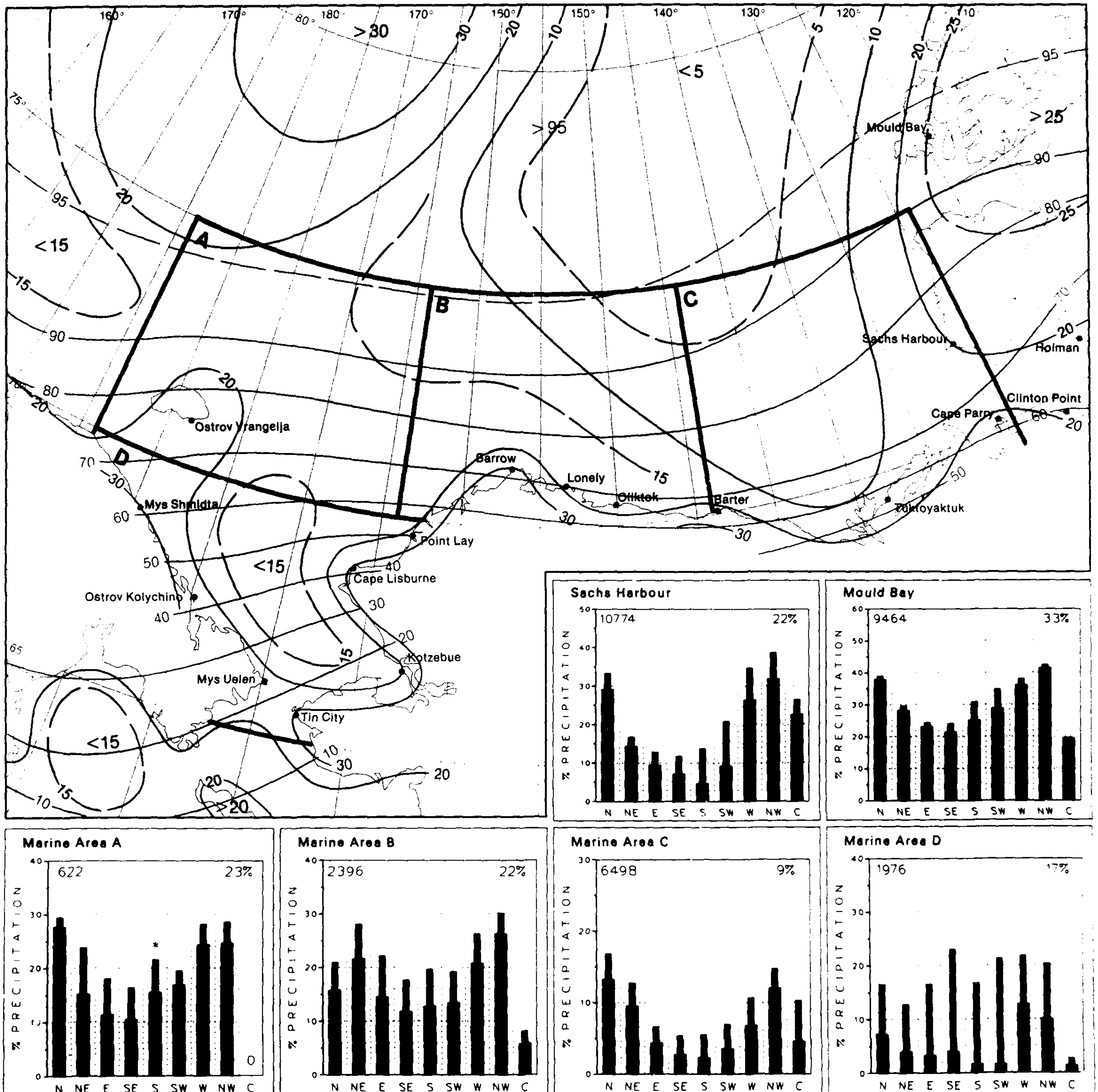


1 Precipitation Aug



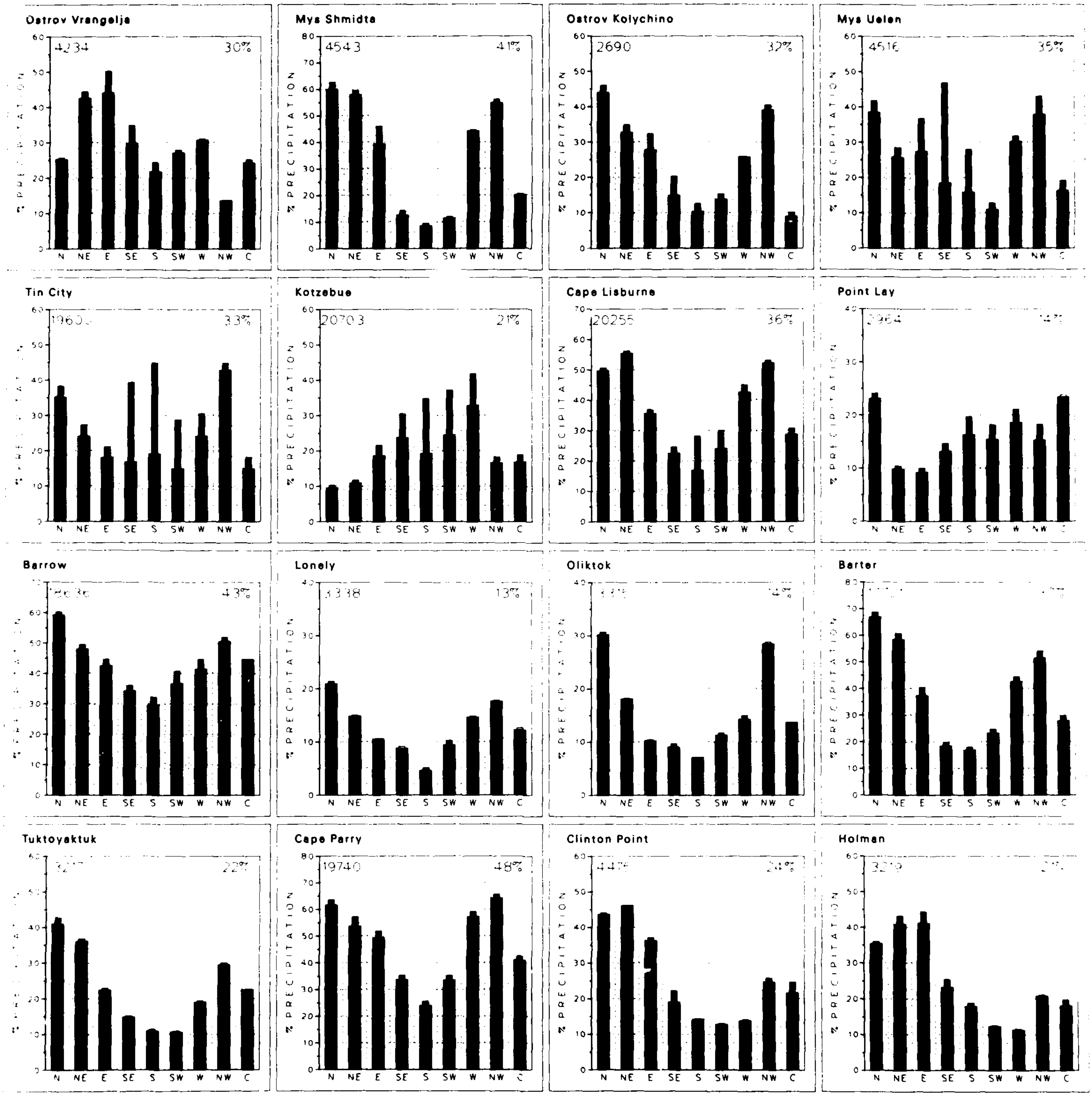
September

1 Precipitation and Wind Direction

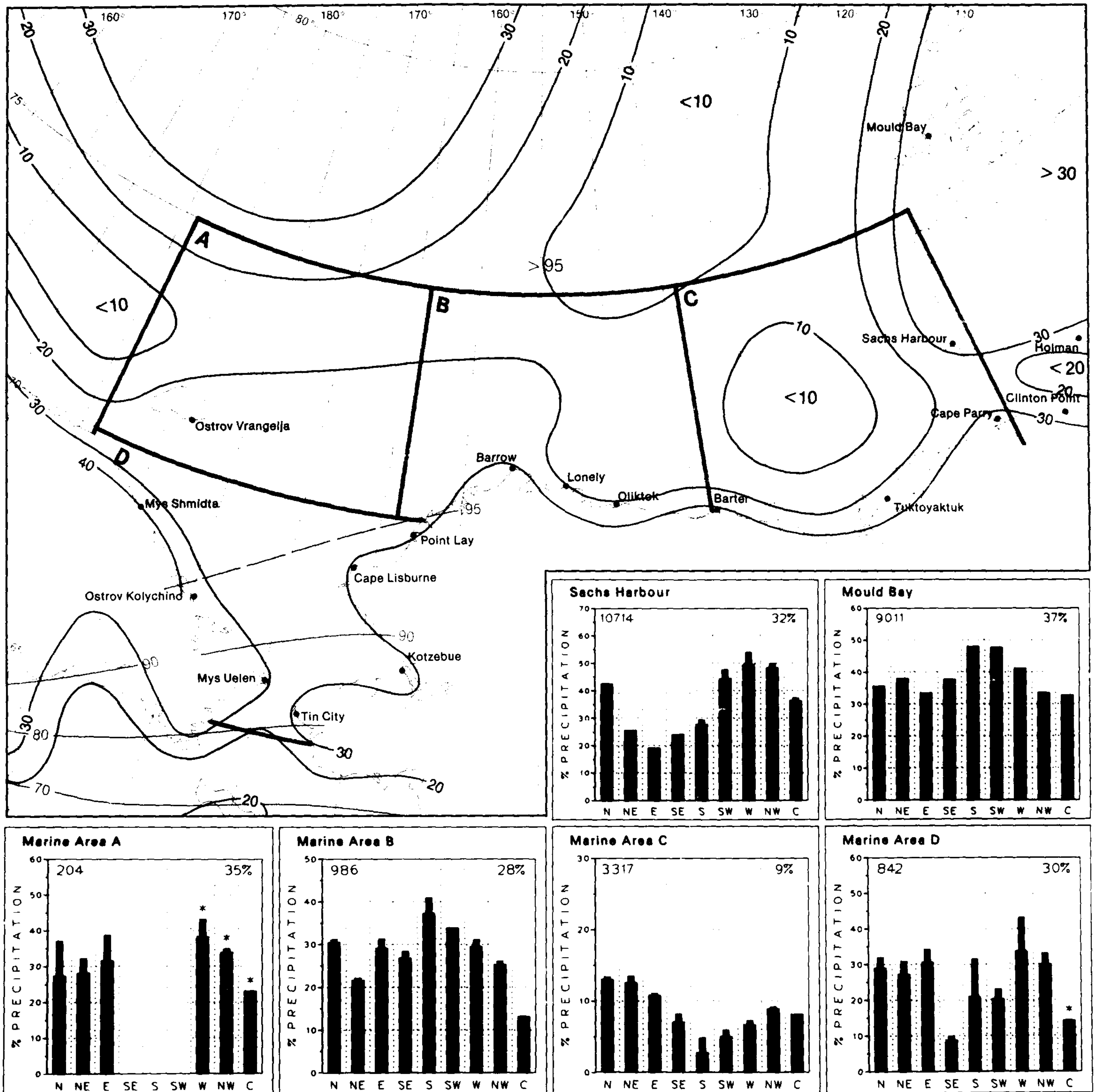


1 Precipitation

September

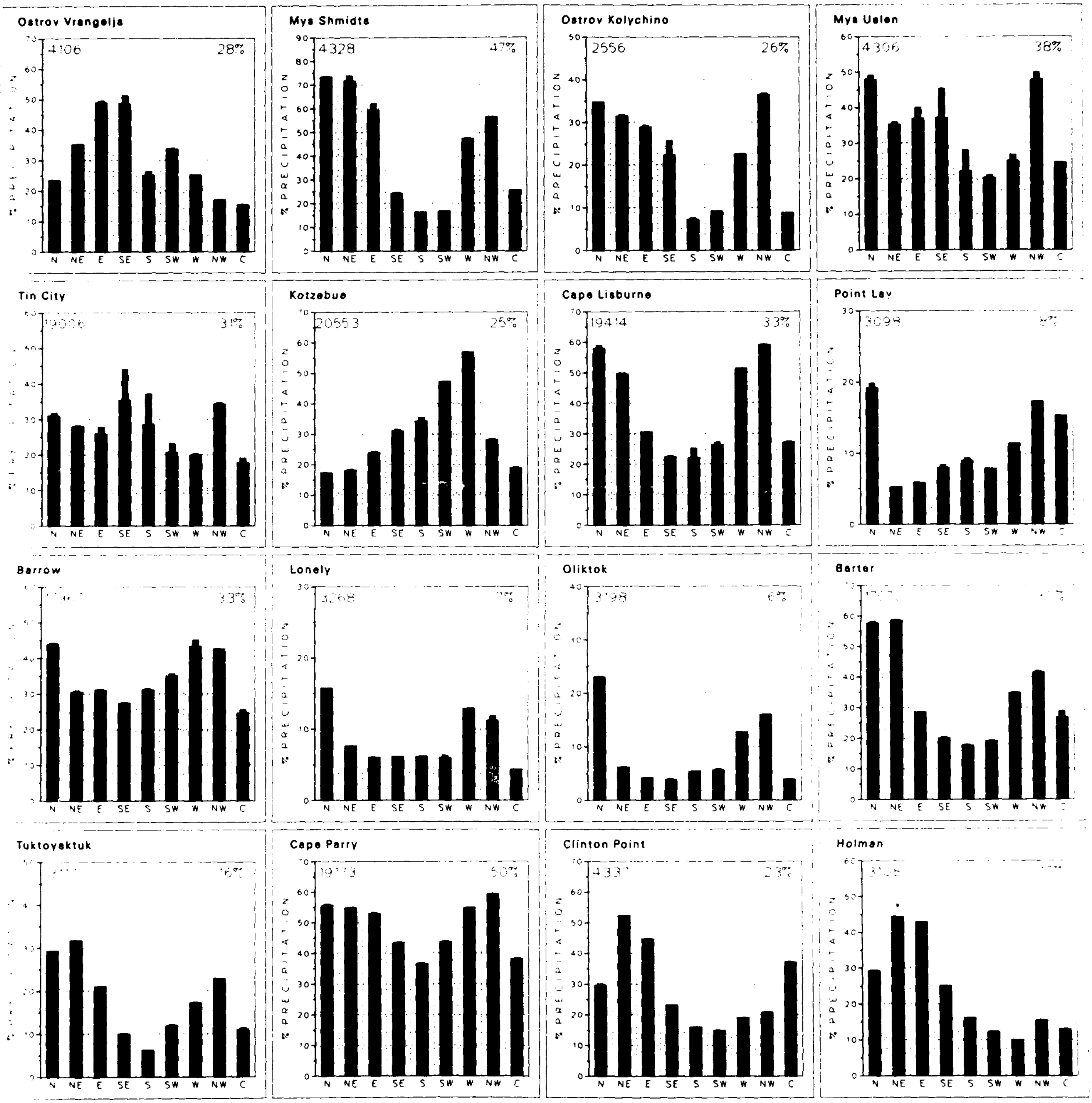


October **1 Precipitation and Wind Direction**

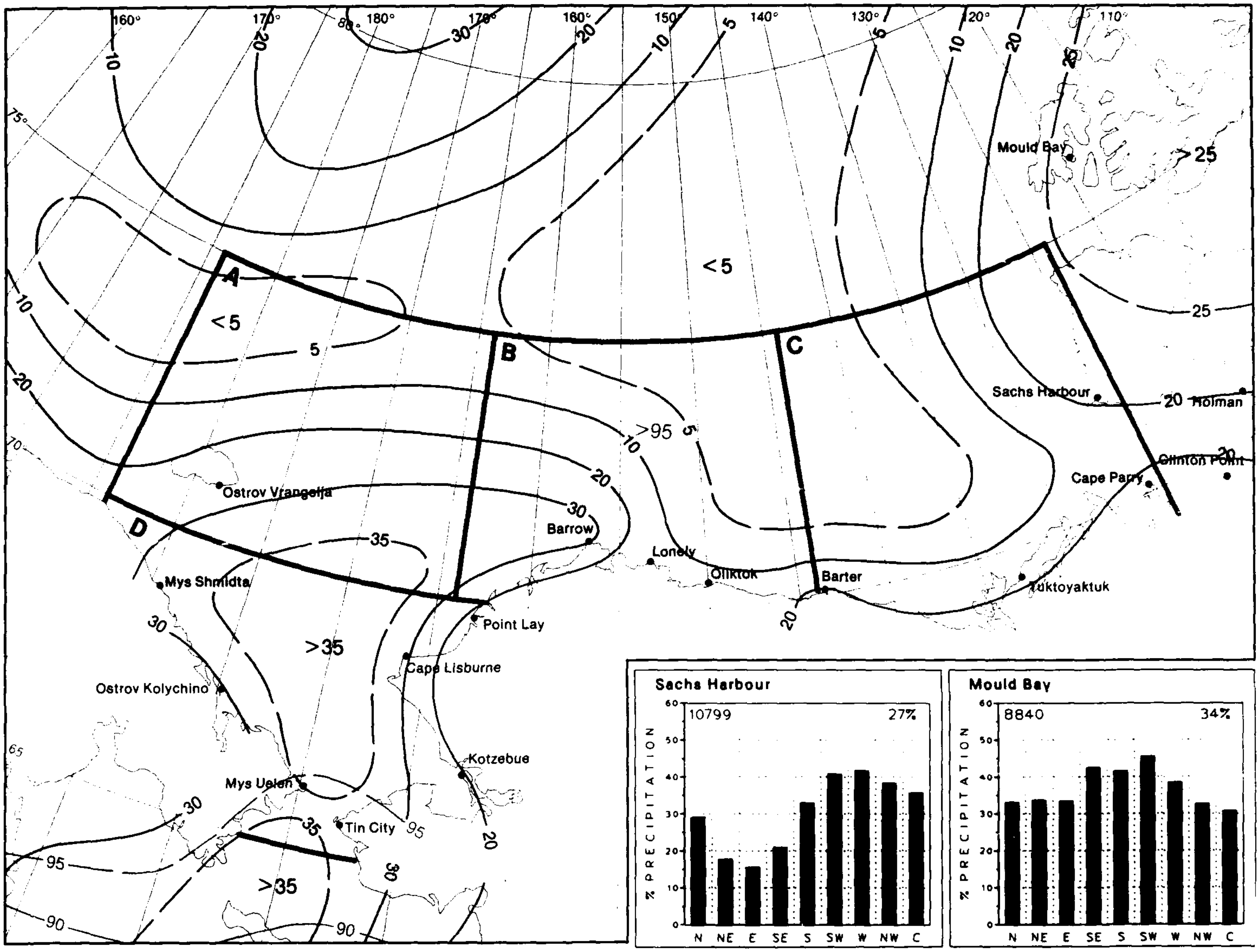


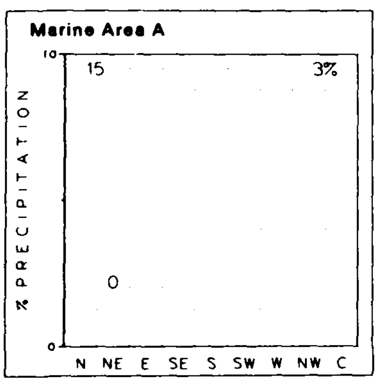
1 Precipitation

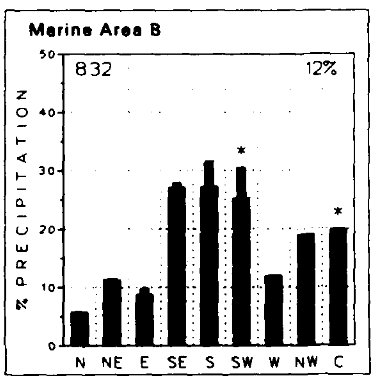
October

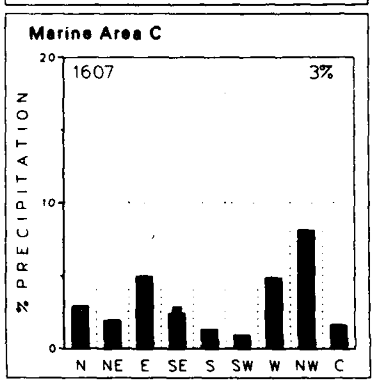


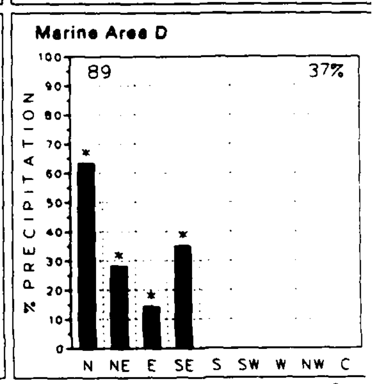
1 Precipitation and Wind Direction





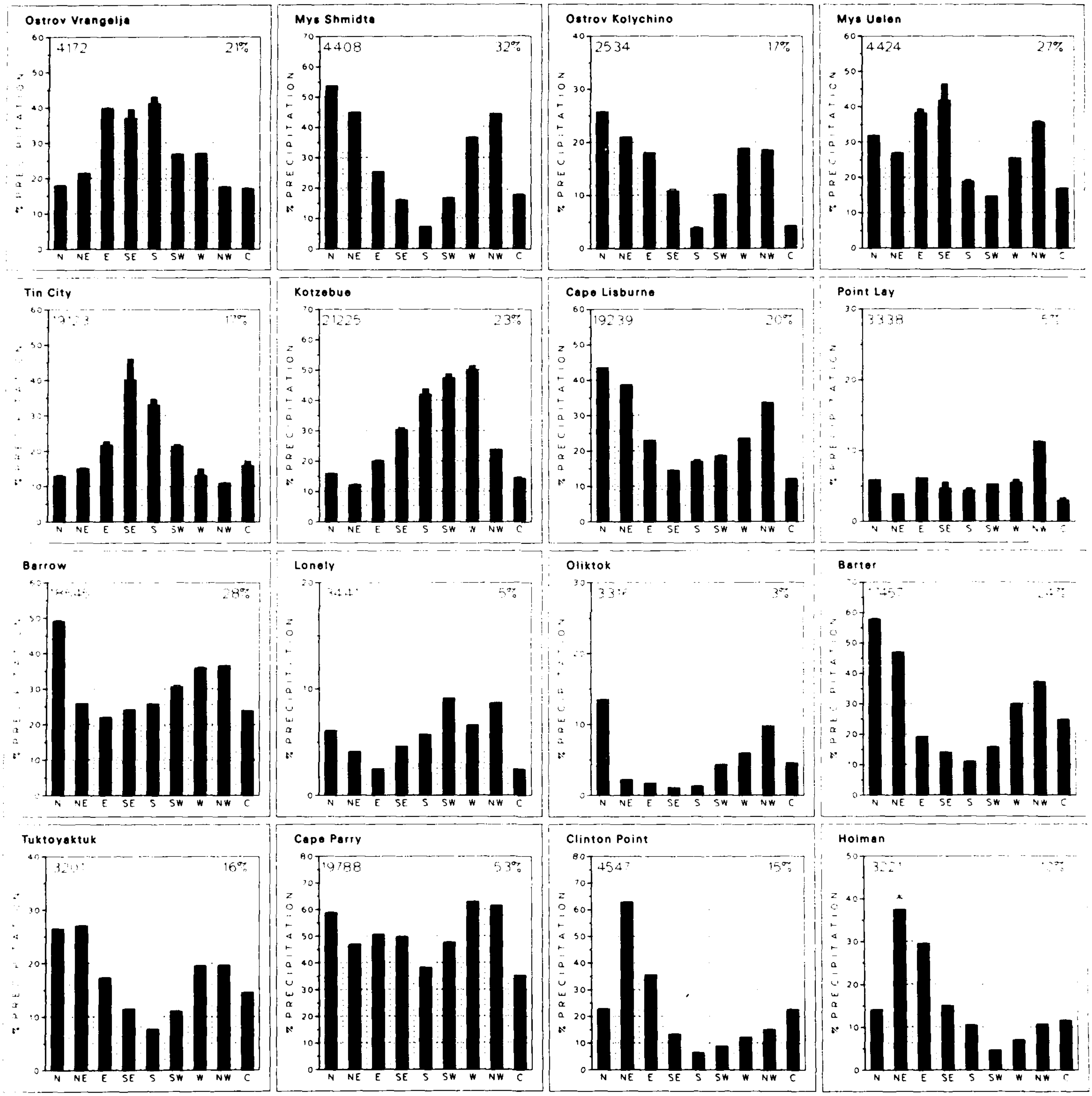






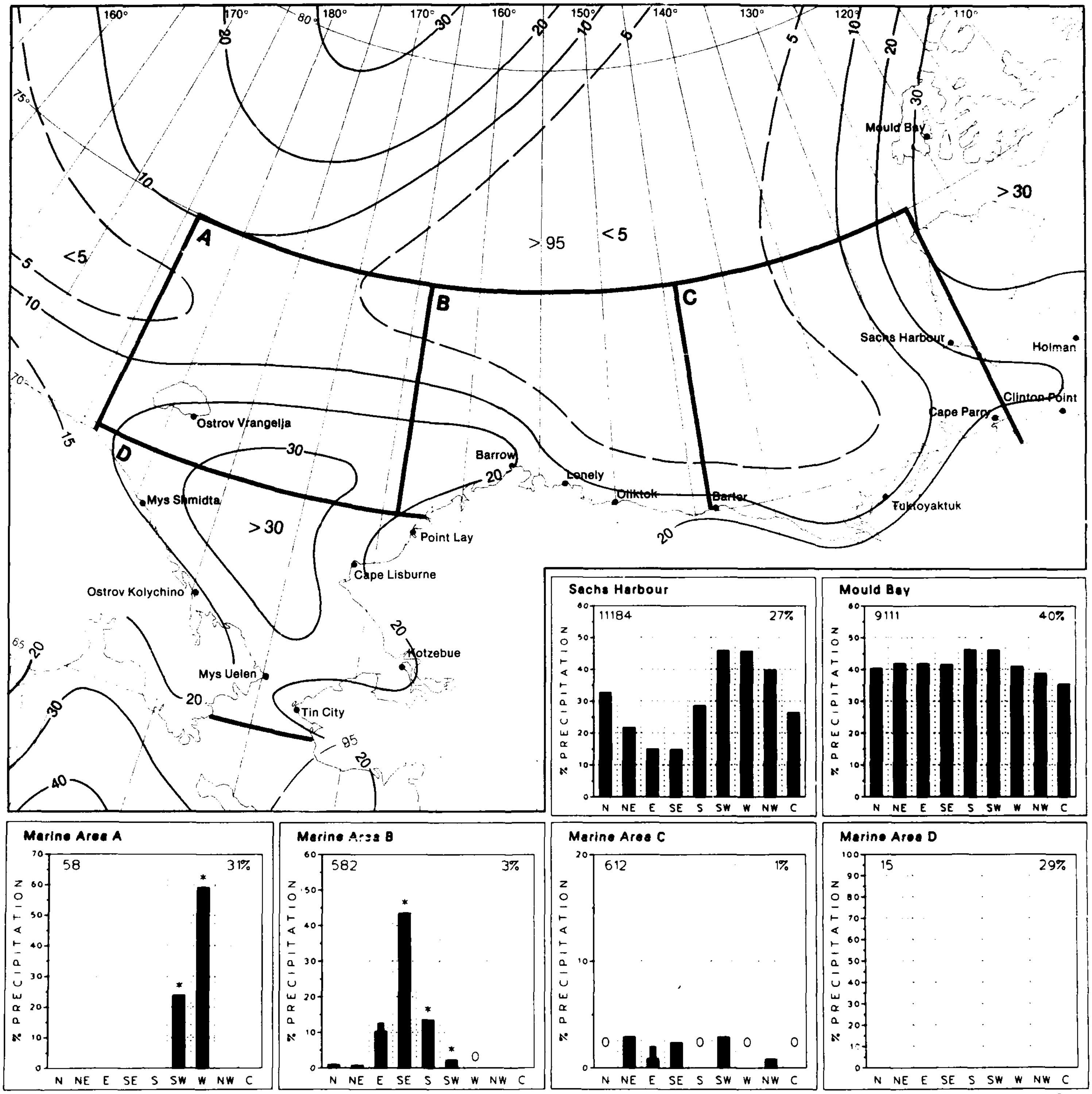
1 Precipitation

Novembe



December

1 Precipitation and Wind Direction



1 Precipitation

December

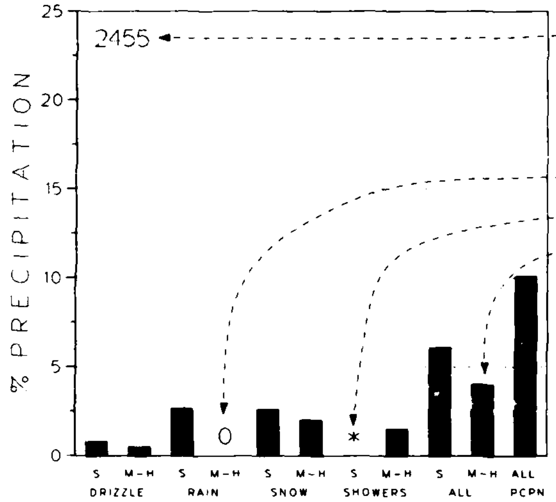
Map 2. Wind/visibility/cloudiness

BLACK LINE – Percent frequency of optimum conditions: Low cloud ceiling (LCC) ≧5000 feet, (or no LCC), visibility ≧5 nautical miles and wind 11–21 knots.

BLUE LINE – Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 feet, visibility <1 nautical mile or wind <6 or ≧34 knots.

Albers Equal–Area Conic Projection

Graphs: Precipitation types



Percent frequency of precipitation by type and intensity (S - slight, M - moderate and H- heavy).

Number of observations.

Bars show percent frequency of observations reporting Precipitation of various types and intensities.

0 ***indicates no observations in the category***

* **indicates <.05% but >0.**

(4% of all observations recorded moderate to heavy precipitation.)

Present weather elements that can be reported in an observation are thunderstorms, lightning, waterspouts, squalls, fog, haze, smoke, dust, and all forms of precipitation. Most present weather codes (ww = 00-99, see table) apply to phenomena occurring at the time of observation, but a few refer to phenomena occurring in the past hour. The highest applicable numerical ww code figure is recorded (except that code 17 has preference over 20 to 49, inclusive). Precipitation includes all forms of water particles, whether liquid or solid, that fall to the earth's surface—rain, drizzle, snow, snow pellets, snow grains, ice crystals, ice pellets, and hail. Each form is classified by its character (continuous, intermittent, showery, or combination), intensity (slight, moderate, or heavy), and type (liquid, freezing, or frozen). In this study, frozen precipitation is defined as any precipitation that reaches the ground in frozen form; it does not include liquid that freezes upon impact with the ground or exposed objects. Refer to the text in Set 1 for additional information on precipitation.

PRESENT WEATHER (WMO Code, 1982)

The present weather (ww) code is arranged in priority order. Reading down the list, select the first applicable (most severe) weather condition that you observe and enter the code number for ww.

50-99 PRECIPITATION AT SHIP AT TIME OF OBSERVATION

95-99 THUNDERSTORM AT TIME OF OBSERVATION

99 Heavy thunderstorm with hail*
98 Thunderstorm with duststorm or sandstorm
97 Heavy thunderstorm with rain and/or snow, but no hail*
96 Slight or moderate thunderstorm with hail*
95 Slight or moderate thunderstorm with rain or snow, but no hail*

*Includes hail, ice pellets, or snow pellets

91-94 THUNDERSTORM DURING THE PAST HOUR BUT NOT AT THE TIME OF OBSERVATION

Note: Use code 29 if there is no precipitation at time of observation.

94 Moderate or heavy snow, or rain and snow mixed, or hail*
93 Slight snow, or rain and snow mixed, or hail*
92 Moderate or heavy rain
91 Slight rain
} *Thunderstorm in past hour*

*Includes hail, ice pellets, or snow pellets

85-90 SOLID PRECIPITATION IN SHOWERS

Slight		Moderate or Heavy
89	Shower or hail*, no thunder	90
87	Shower of snow pellets or ice pellets†	88
85	Shower of snow	86

†With or without rain, or rain and snow mixed
*Include hail, ice pellets, or snow pellets

80-84 RAIN SHOWERS

84 Shower of rain and snow mixed, moderate or heavy
83 Shower of rain and snow mixed, slight
82 Violent rain shower
81 Moderate or heavy rain shower
80 Slight rain shower

70-79 SOLID PRECIPITATION NOT FALLING AS SHOWERS

79 Ice pellets
78 Isolated star-like snow crystals(with or without fog)
77 Snow grains (with or without fog)
76 Diamond dust (with or without fog)

Intermittent		Continuous
74	Heavy snow in flakes	75
72	Moderate snow in flakes	73
70	Slight snow in flakes	71

60-69 RAIN (NOT FALLING AS SHOWERS)

Slight		Moderate or Heavy
68	Rain or drizzle with snow	69
66	Freezing rain	67

Intermittent		Continuous
64	Heavy rain	65
62	Moderate rain	63
60	Slight rain	61

50-59 DRIZZLE

Slight		Moderate or heavy
58	Drizzle and rain mixed	59
56	Freezing drizzle	57

Intermittent		Continuous
54	Heavy drizzle	55
52	Moderate drizzle	53
50	Slight drizzle	51

00-49 NO PRECIPITATION AT SHIP AT TIME OF OBSERVATION

17 Thunder at time of observation, no precipitation at ship

40-49 FOG AT TIME OF OBSERVATION

(Visibility in fog is less than ½ nautical mile)

Sky visible		Sky invisible
48	Fog, depositing rime	49
46	Fog, has begun or thickened in past hour	47
44	Fog, no change in past hour	45
42	Fog, has become thinner in past hour	43
41	Fog in patches	
40	Fog at a distance but not at ship in past hour	

30-39 (Not likely to be used in ship reports)

Slight or moderate		Heavy
38	Blowing snow, high (above eye level)	39
36	Drifting snow, low (below eye level)	37
32	Duststorm or sandstorm, increasing	35
31	Duststorm or sandstorm, unchanging	34
30	Duststorm or sandstorm, decreasing	33

20-29 PHENOMENA IN PAST HOUR BUT NOT AT TIME OF OBSERVATION

29 Thunderstorm, with or without precipitation
28 Fog (in past hour but not at time of obs.)
27 Shower(s) of hail*, or of hail*, and rain mixed
26 Shower(s) of snow, or of rain and snow mixed
25 Shower(s) of rain
24 Freezing drizzle or freezing rain
23 Rain and snow mixed, or ice pellets
22 Snow
21 Rain (not freezing)
20 Drizzle (not freezing) or snow grains
} *Not falling as shower*

*Includes hail, ice pellets or snow pellets

18-19 SQUALLS, FUNNEL CLOUDS

19 Funnel cloud(s) seen in past hour or at time of obs
18 Squalls (no precip.) in past hour or at time of obs

13-16 PHENOMENA WITHIN SIGHT BUT NOT AT SHIP

16 Precip. within 3 naut. mi.—reaching surface
15 Precip. beyond 3 naut. mi.—reaching surface
14 Precipitation in sight, not reaching surface
13 Lightning visible, no thunder heard

10-12 MIST AND SHALLOW FOG

12 Shallow fog—more or less continuous
11 Shallow fog in patches
} *Fog not deeper than 10 (33 feet)*
10 Mist (Visibility ½ nautical mile or more)

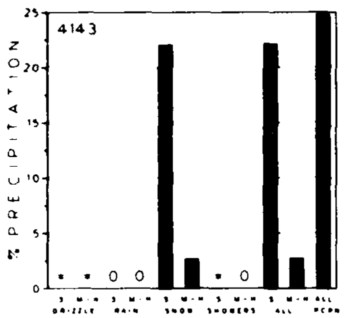
04-09 HAZE, DUST, SAND, OR SMOKE

09 Duststorm or sandstorm within sight
08 Dust whirls in past hour (NOT FOR MARINE USE
07 Blowing spray at ship
06 Widespread dust suspended in the air
05 Dry haze
04 Visibility reduced by smoke

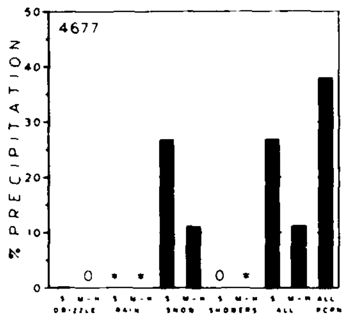
00-03 CHANGE OF SKY DURING PAST HOUR

Code figs.	
03	Clouds generally forming or developing
02	State of the sky on the whole unchanged
01	Clouds dissolving or becoming less developed
00	Cloud development not observable

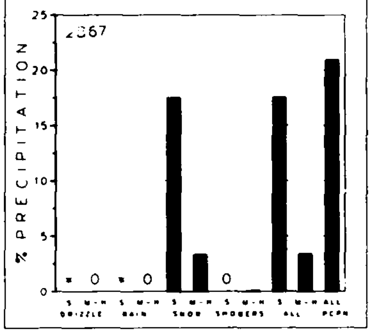
Ostrov Vrangelja



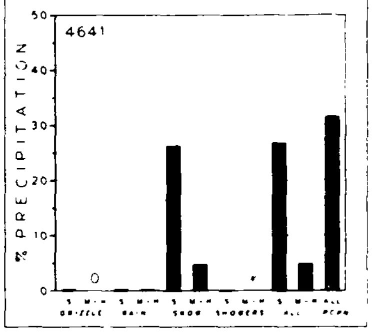
Mys Shmidta



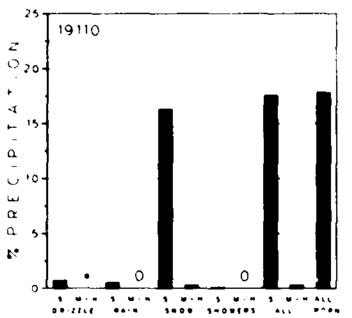
Ostrov Kolychino



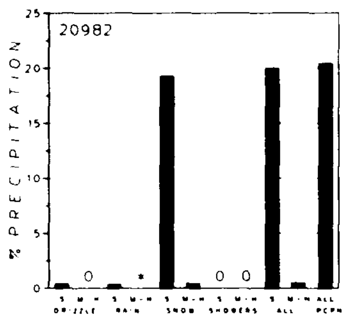
Mys Uelen



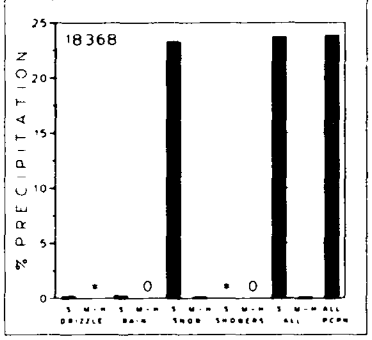
Tin City



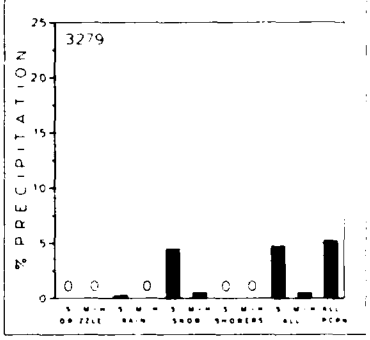
Kotzebue



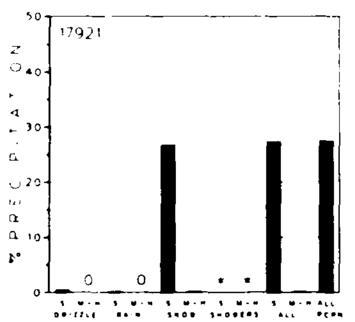
Cape Lisburne



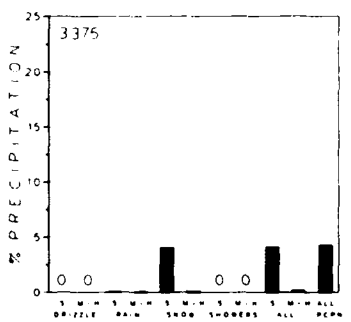
Point Lay



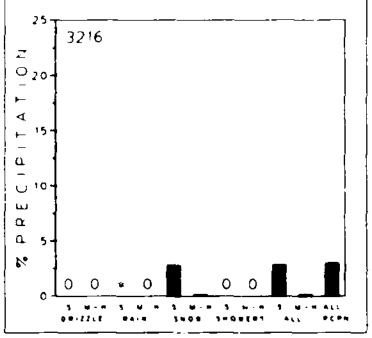
Barrow



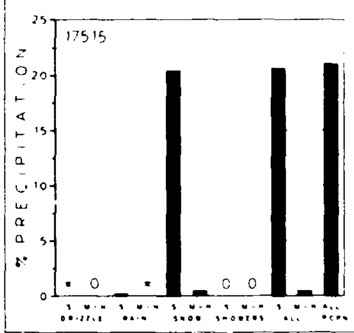
Lonely



Oliktok



Barter



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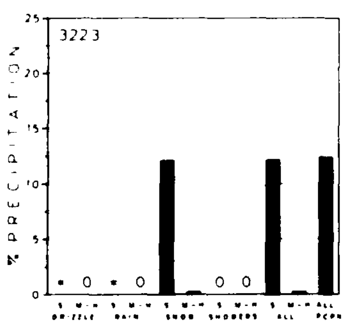
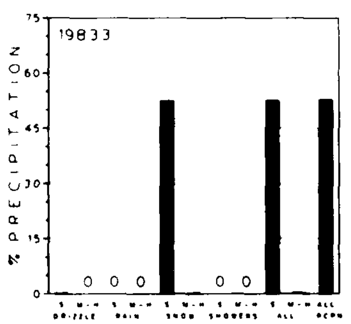
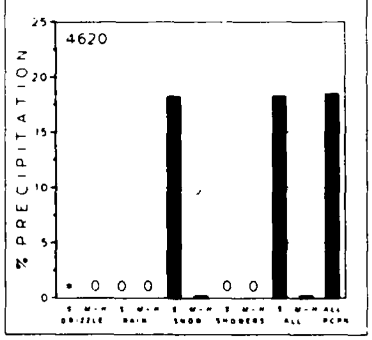


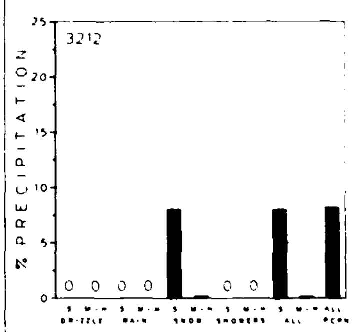
Cape Parry

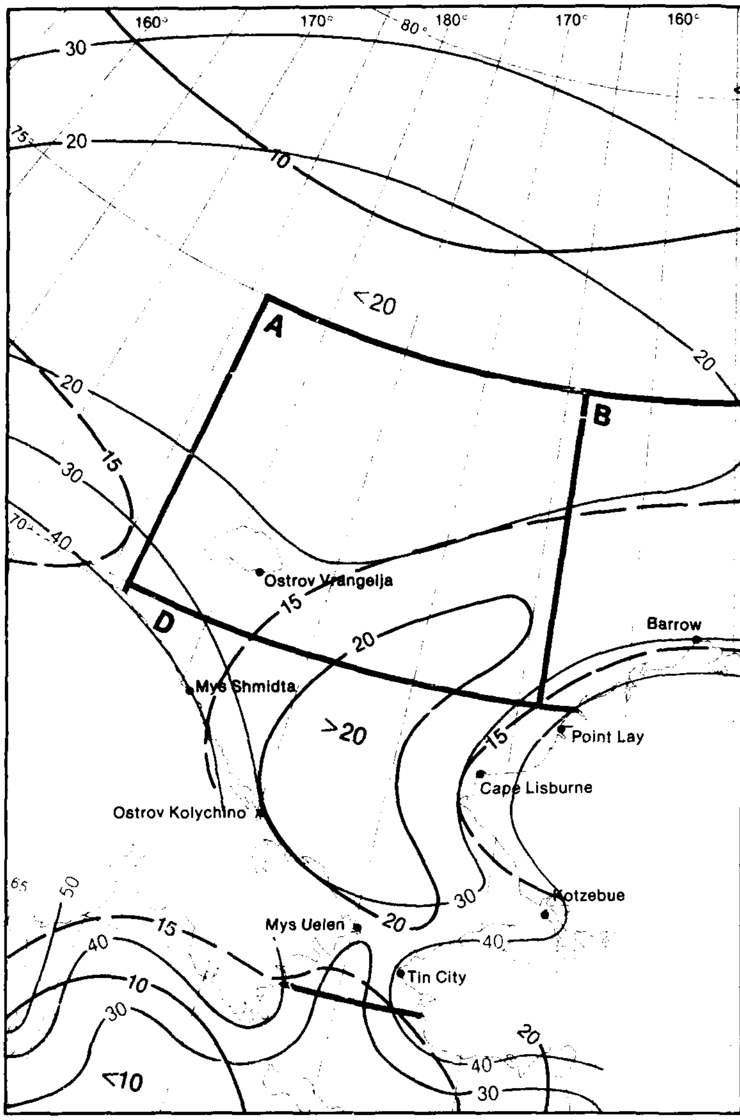


Clinton Point



Holman





160°
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A
B
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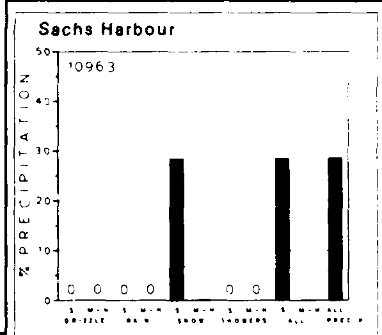
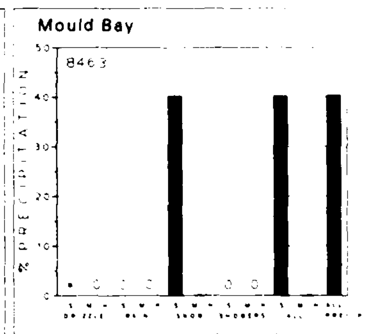
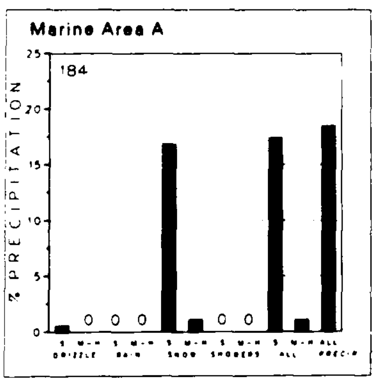
D
Mould Bay
Sachs Harbour
Holman
Clinton Point
Cape Parry
Tuktoyaktuk
Barter
Barrow
Lonely
Oliktok
Point Lay
Cape Lisburne
Kotzebue
Tin City
Mys Uelen
Ostrov Kolychino
Mys Shmidta
Ostrov Vrangelja



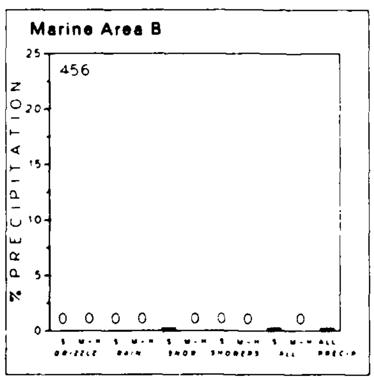
Sachs Harbour
10963
% PRECIPITATION



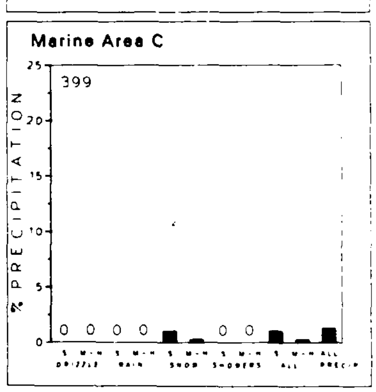
Mould Bay
8463
% PRECIPITATION



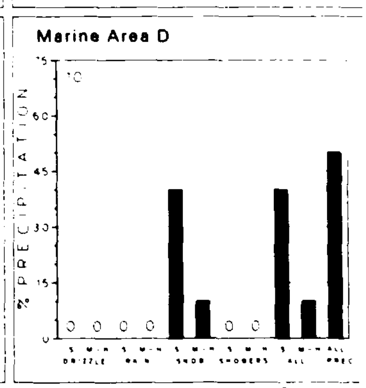
Marine Area A
184
% PRECIPITATION



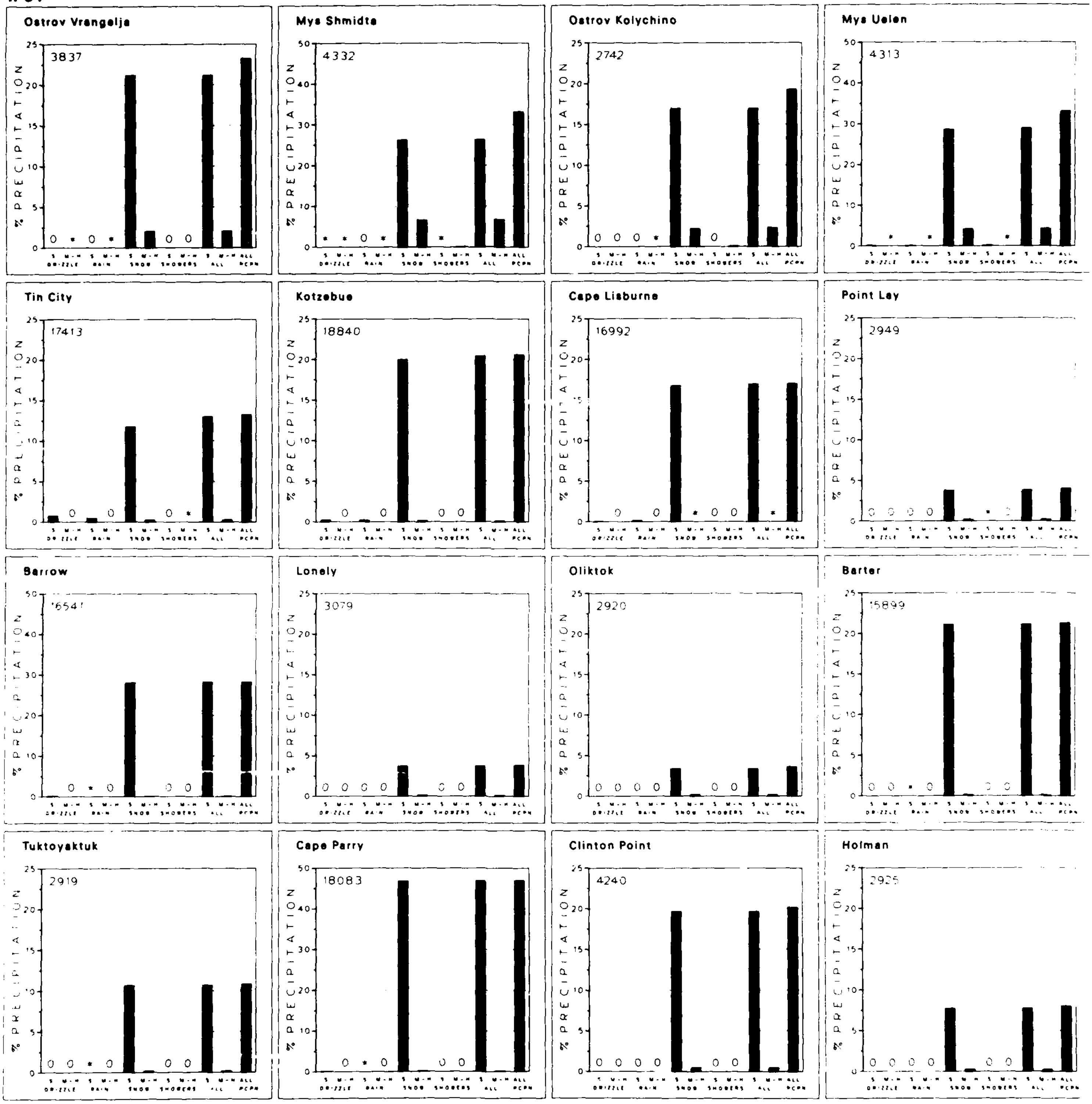
Marine Area B
456
% PRECIPITATION

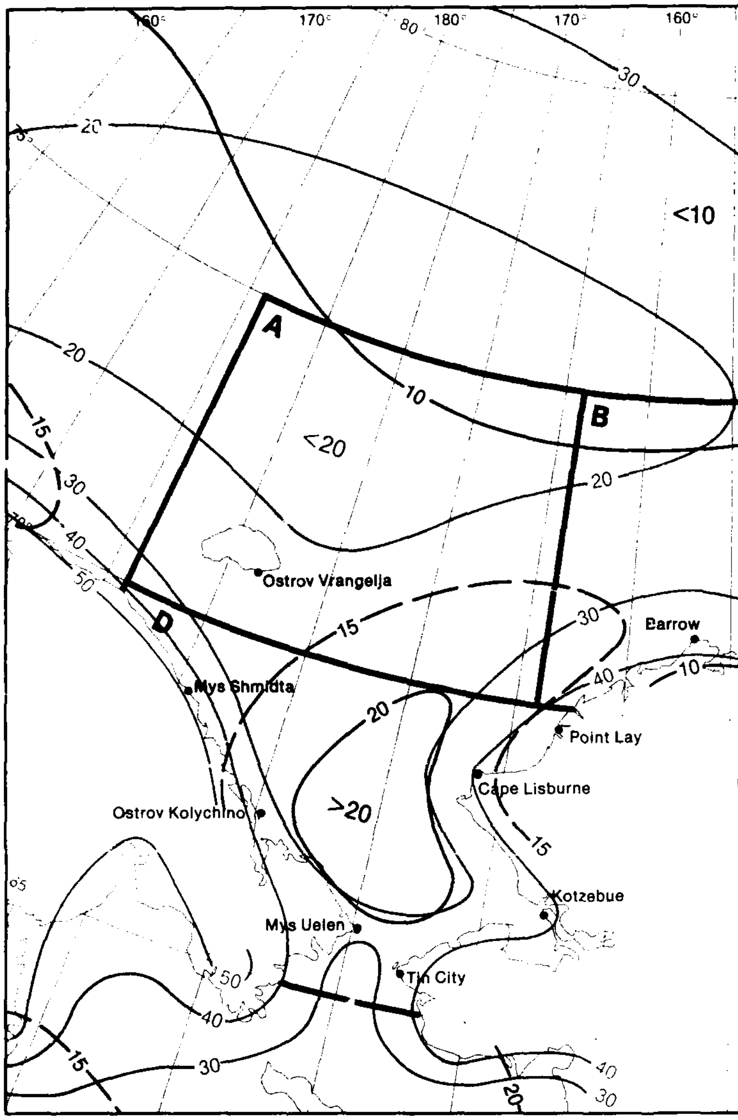


Marine Area C
399
% PRECIPITATION



Marine Area D
% PRECIPITATION


Ostrov Vrangelja
3837
Mys Shmidta
4332
Ostrov Kolychino
2742
Mys Uelen
4313
Tin City
17413
Kotzebue
18840
Cape Lisburne
16992
Point Lay
2949
Barrow
Lonely
3079
Oliktok
2920
Barter
15899
Tuktoyaktuk
2919
Cape Parry
18083
Clinton Point
4240
Holman
% PRECIPITATION
DRIZZLE
RAIN
SNOW
SHOWERS
ALL
ALL PCPN



160°
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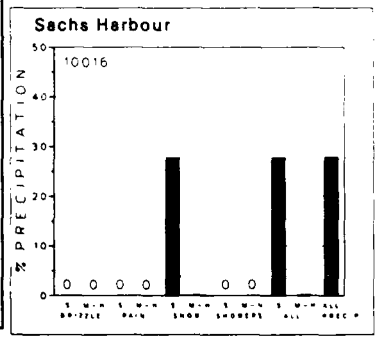
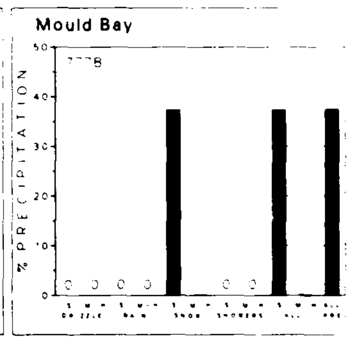
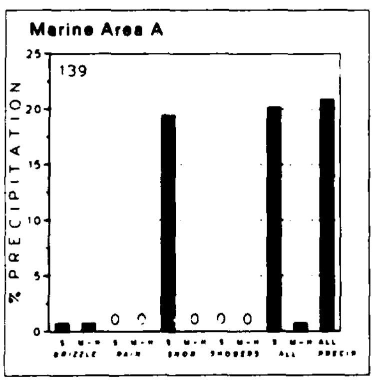
C
<20
20
30
15
Sachs Harbour
20
Holma
15
30
40
Clinton Poir
50
Cape Parry
Ostrov Vrangelja
>20
15
20
D
30
Barrow
Lonely
10
Oliktok
Barter
Tuktoyaktuk
40
Mys Shmidta
20
Point Lay
Cape Lisburne
Ostrov Kolychino
>20
15
Kotzebue
Mys Uelen
50
Tin City
40
15
30
40
20
30



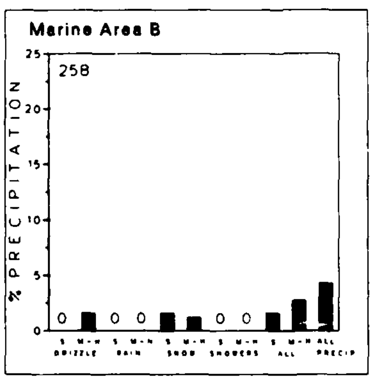
Sachs Harbour
10016
% PRECIPITATION



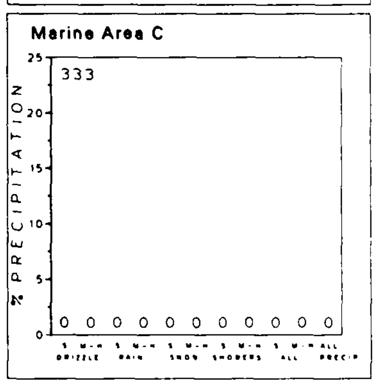
Mould Bay
% PRECIPITATION



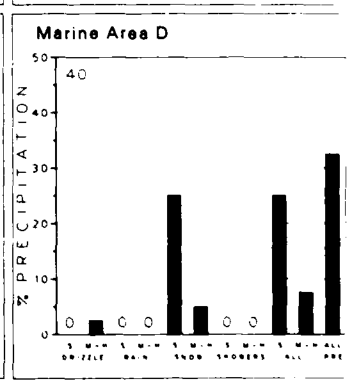
Marine Area A
139
% PRECIPITATION



Marine Area B
258
% PRECIPITATION

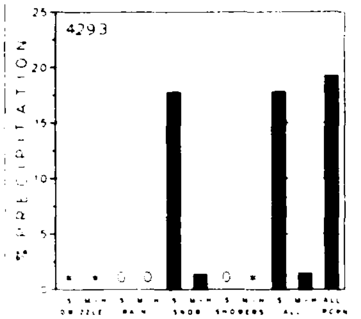


Marine Area C
333
% PRECIPITATION

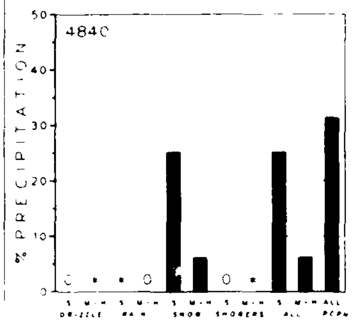


Marine Area D
40
% PRECIPITATION

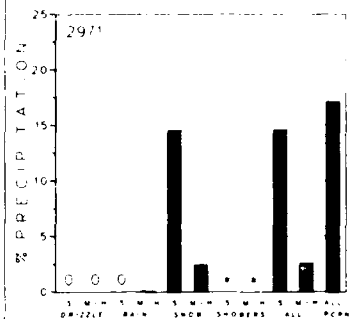
Ostrov Vrangelja



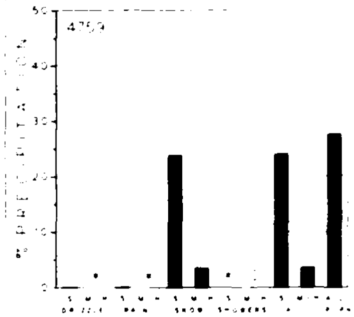
Mys Shmidta



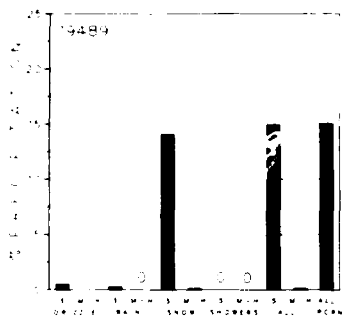
Ostrov Kolychino



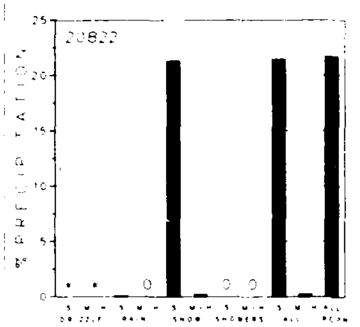
Mys Uelen



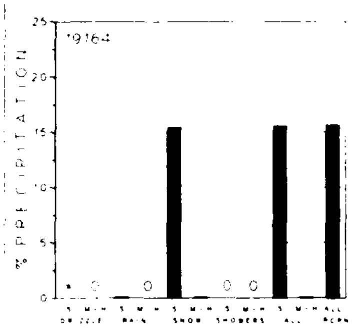
Tin City



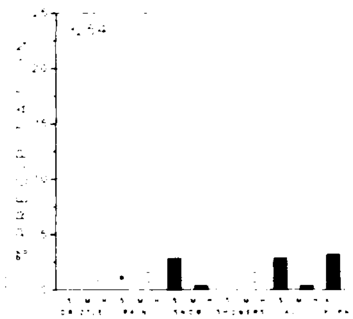
Kotzebue



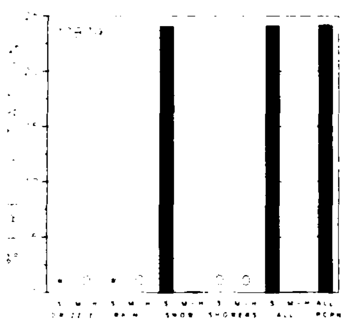
Cape Lisburne



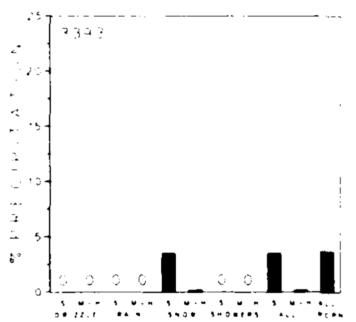
Point Lay



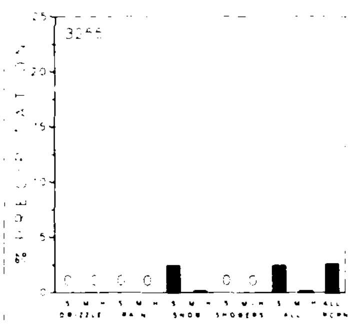
Barrow



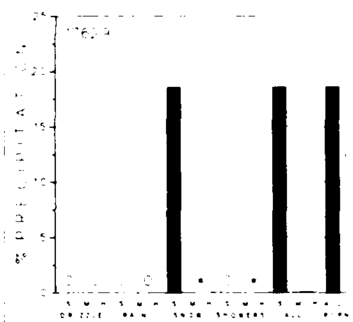
Lonely



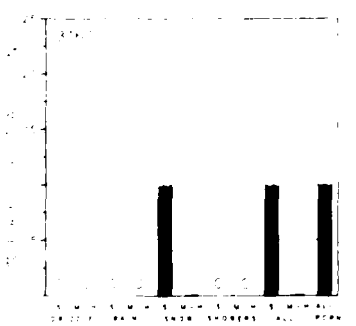
Oliktok



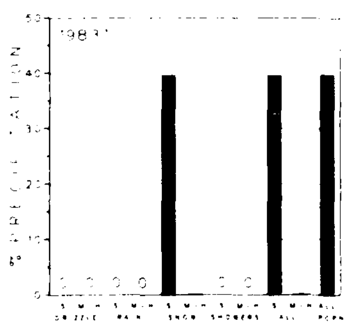
Barter



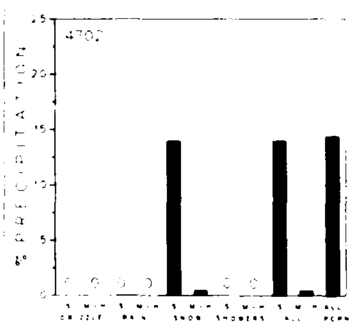
Tuktoyaktuk



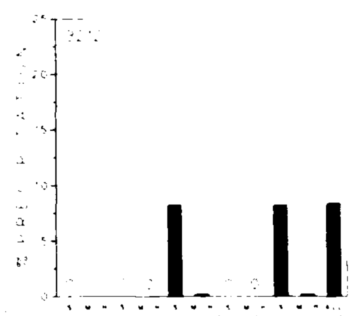
Cape Parry

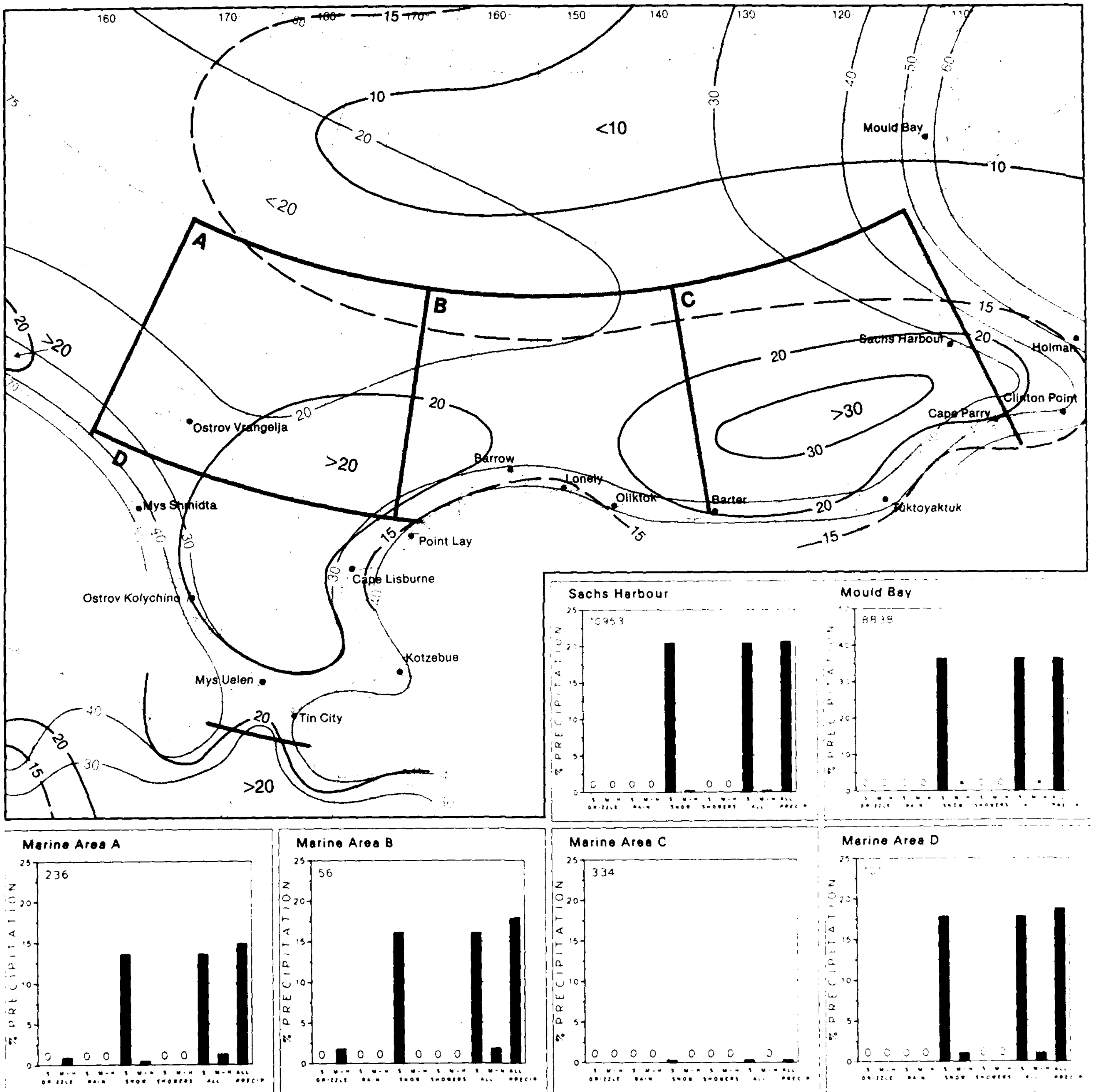


Clinton Point



Holman

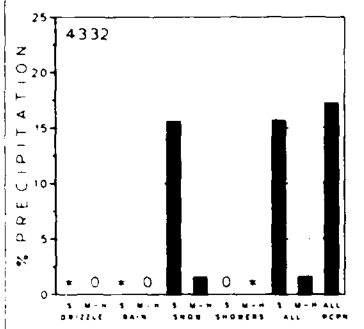




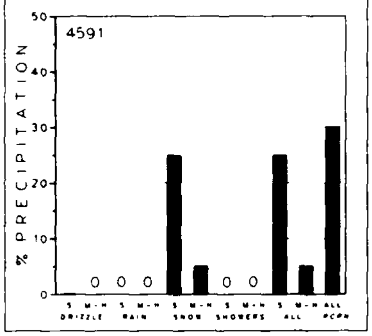
2 Wind-Visibility-Cloudiness

March

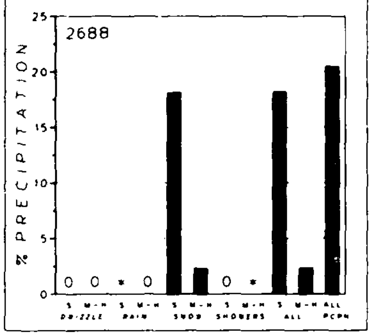
Ostrov Vrangelja



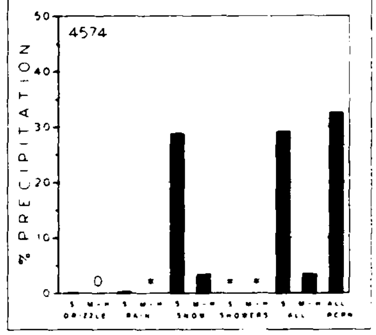
Mys Shmidta



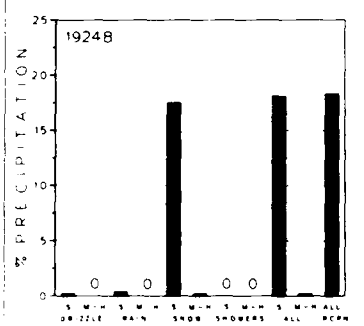
Ostrov Kolychino



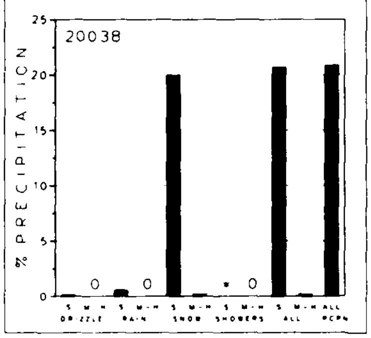
Mys Uelen



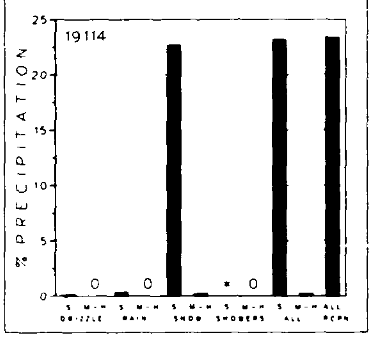
Tin City



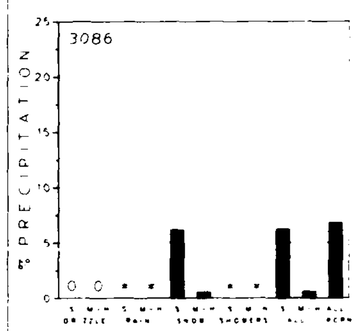
Kotzebue



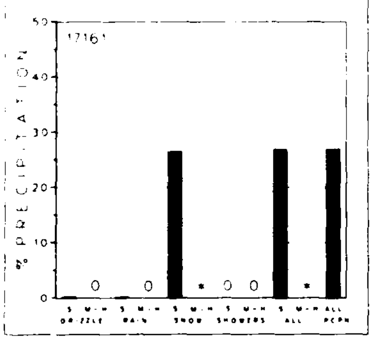
Cape Lisburne



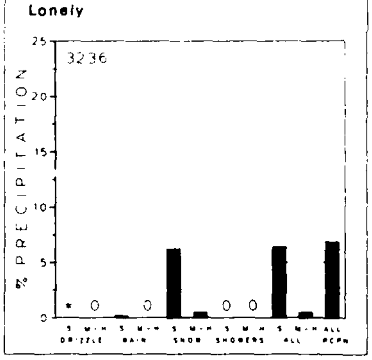
Point Lay



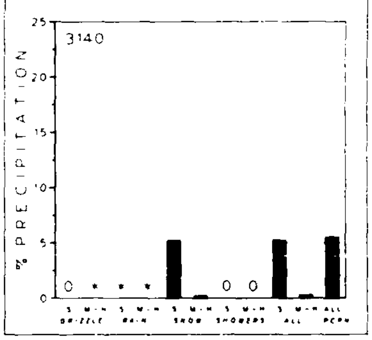
Barrow



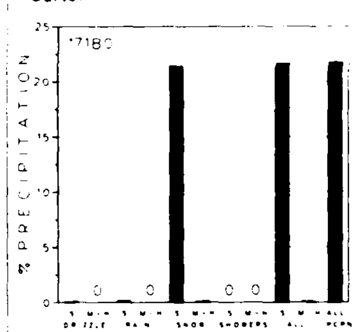
Lonely



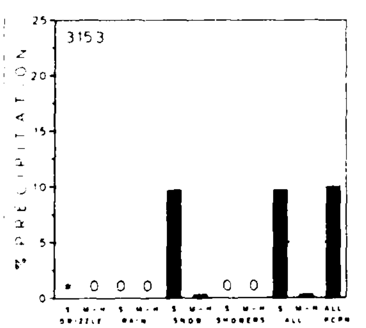
Oliktok



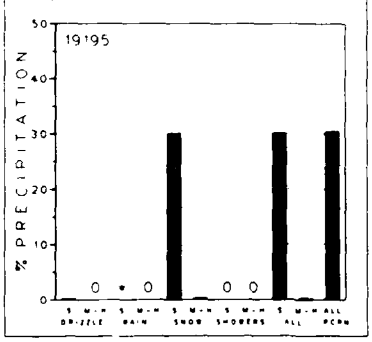
Barter



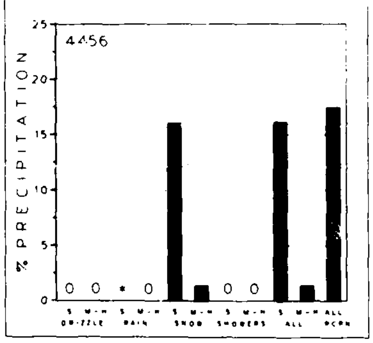
Tuktoyaktuk



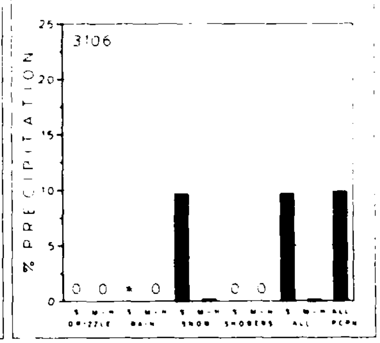
Cape Parry

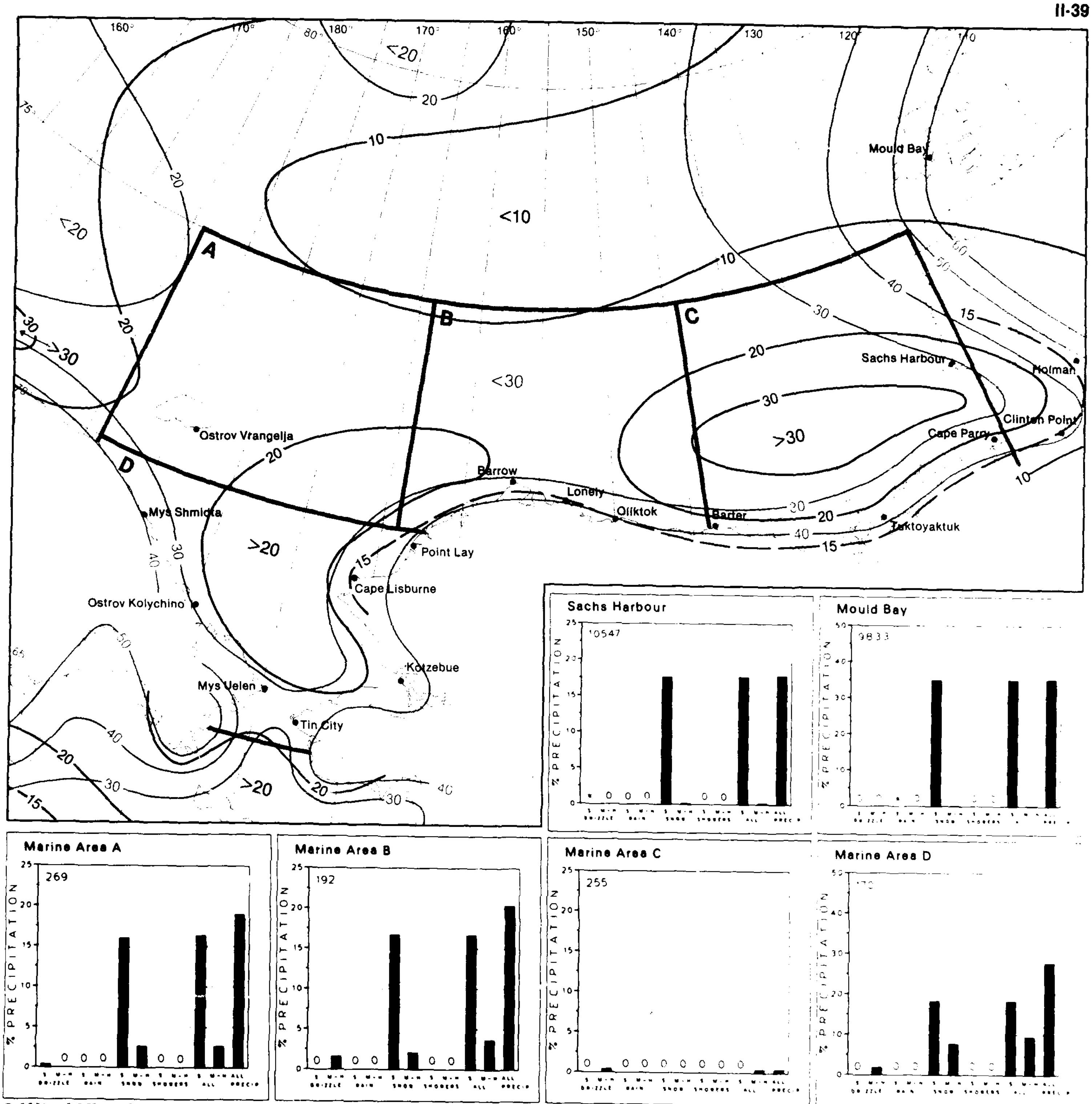


Clinton Point

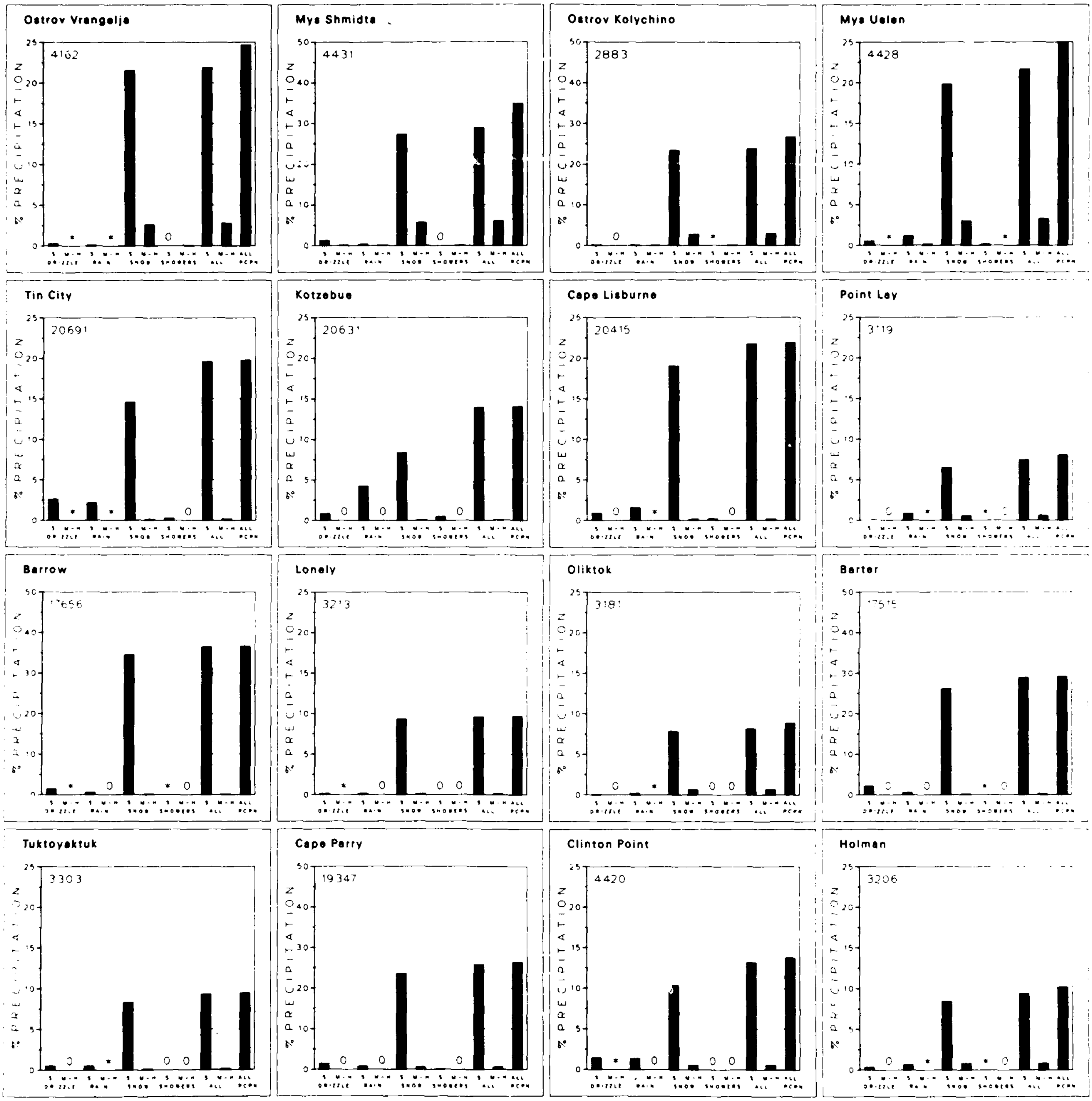


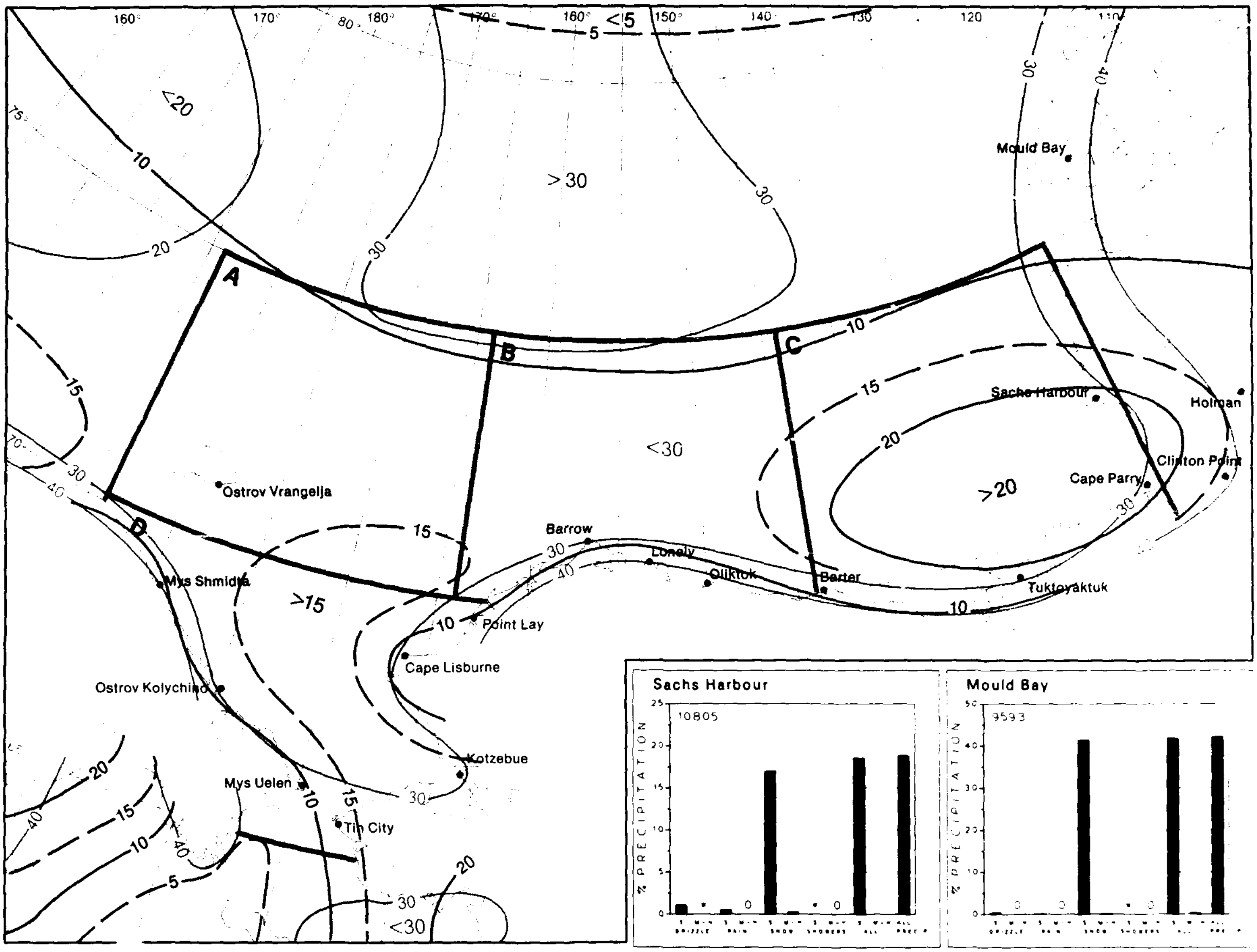
Holman

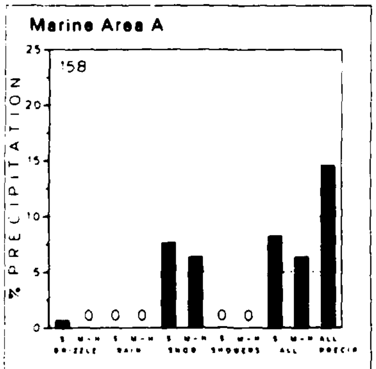


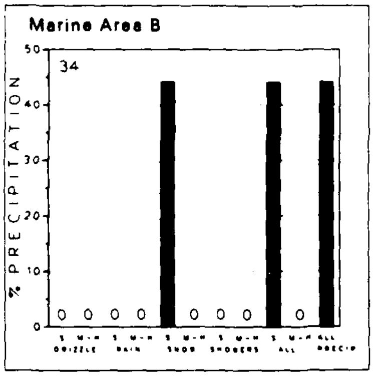


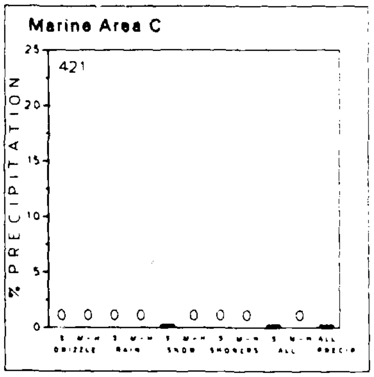
2 Wind-Visibility-Cloudiness

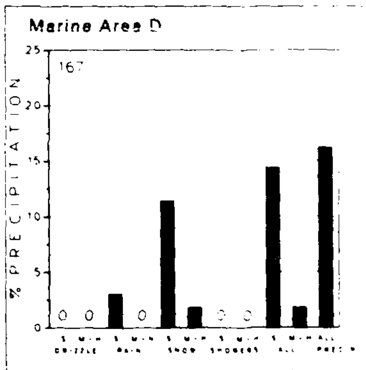

Ostrov Vrangelja
4162
Mys Shmidta
4431
Ostrov Kolychino
2883
Mys Uelen
4428
Tin City
20691
Kotzebue
20631
Cape Lisburne
20415
Point Lay
3119
Barrow
17656
Lonely
3213
Oliktok
3181
Barter
17515
Tuktoyaktuk
3303
Cape Parry
19347
Clinton Point
4420
Holman
3206
% PRECIPITATION
DRIZZLE
RAIN
SNOW
SHOWERS
ALL
ALL PCPN

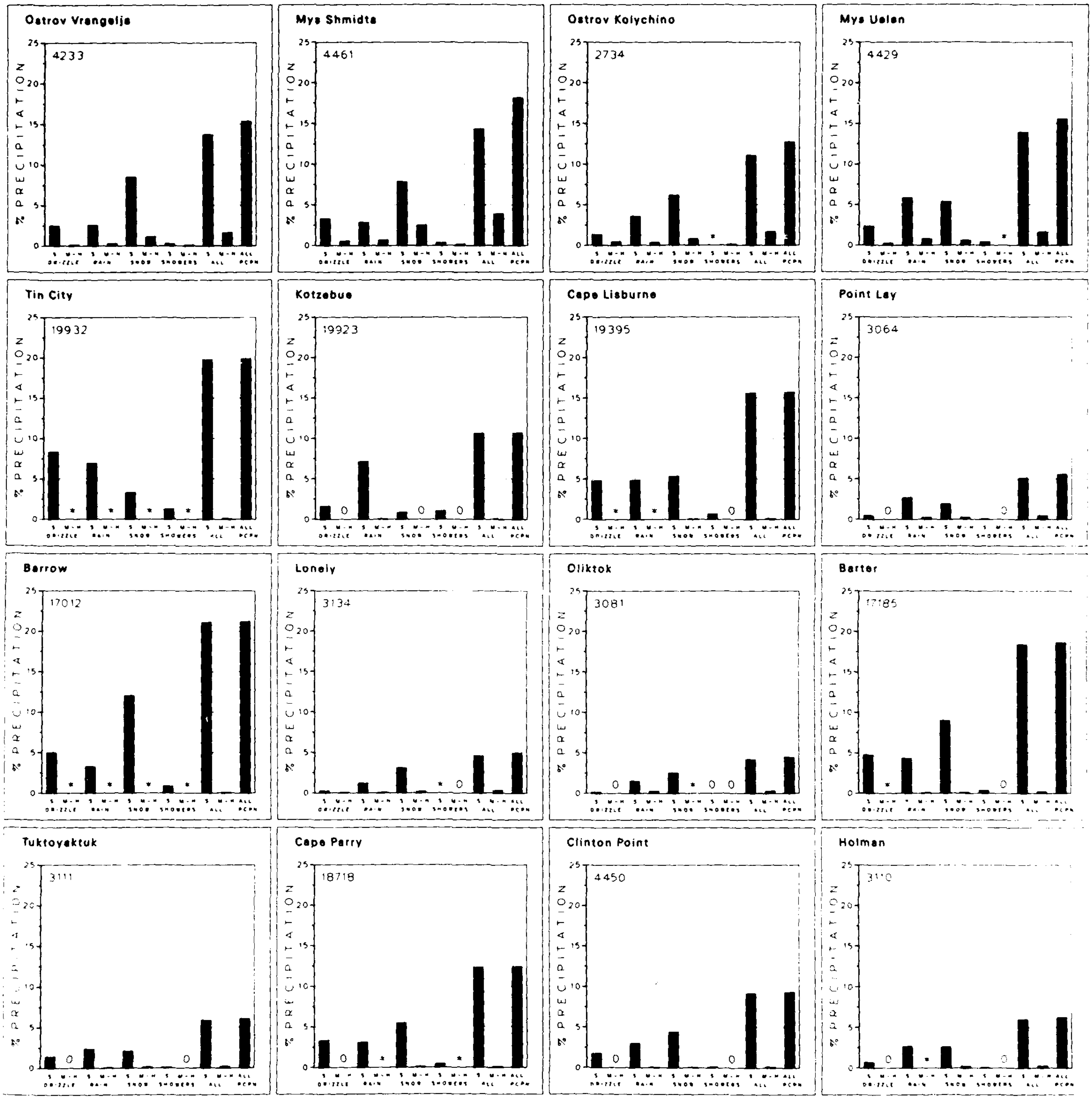

160°
170°
80°
180°
170°
160°
<5
5
150°
140°
130
120
110
30
40
75°
<20
10
20
>30
30
30
A
B
C
D
10
15
20
Mould Bay
Sachs Harbour
Holman
Clinton Point
Cape Parry
>20
<30
70°
30
40
Ostrov Vrangelja
15
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Mys Shmidta
>15
10
Point Lay
Cape Lisburne
Ostrov Kolychino
Kotzebue
Mys Uelen
Tin City
<30
5
Sachs Harbour
10805
% PRECIPITATION
Mould Bay
9593
% PRECIPITATION

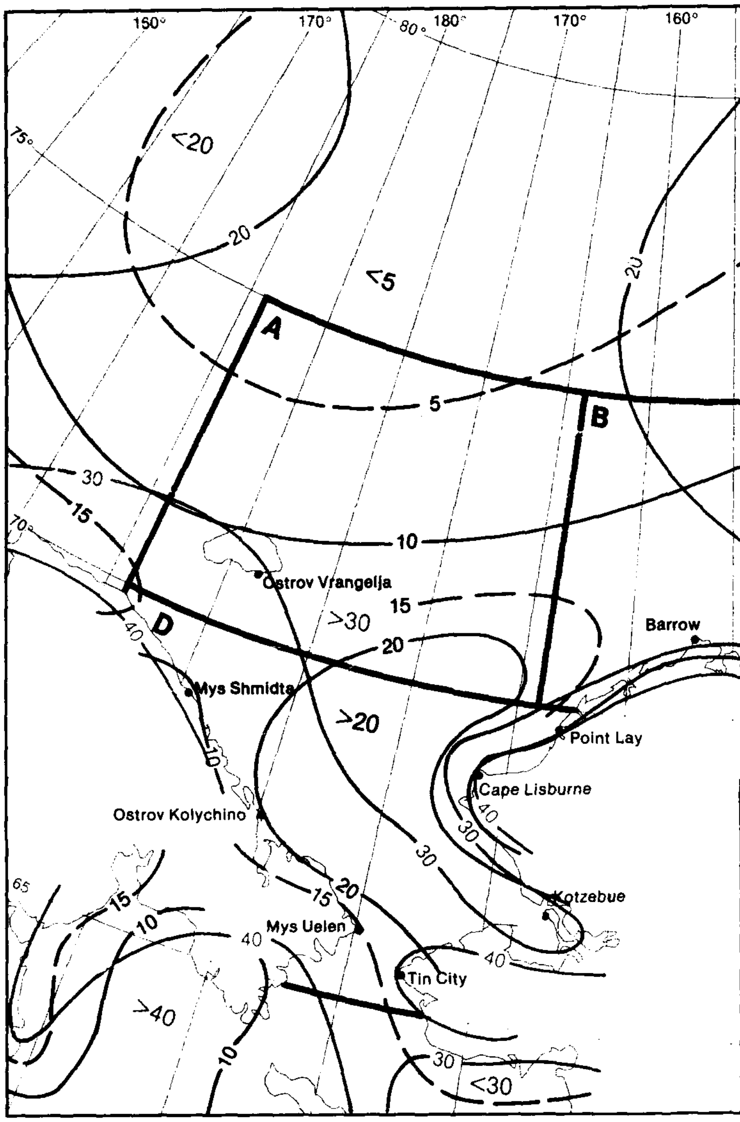

Marine Area A
158
% PRECIPITATION


Marine Area B
34
% PRECIPITATION

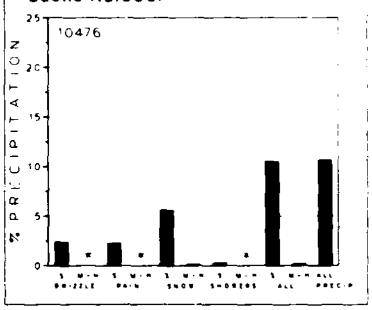

Marine Area C
421
% PRECIPITATION


Marine Area D
167
% PRECIPITATION

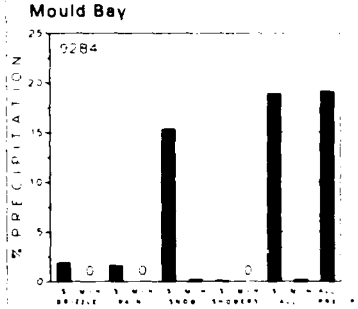

Ostrov Vrangelja
4233
Mys Shmidta
4461
Ostrov Kolychino
2734
Mys Uelen
4429
Tin City
19932
Kotzebue
19923
Cape Lisburne
19395
Point Lay
3064
Barrow
17012
Lonely
3134
Oliktok
3081
Barter
17185
Tuktoyaktuk
3111
Cape Parry
18718
Clinton Point
4450
Holman
% PRECIPITATION
S M-H DRIZZLE S M-H RAIN S M-H SNOW S M-H SHOWERS S M-H ALL ALL PCPN



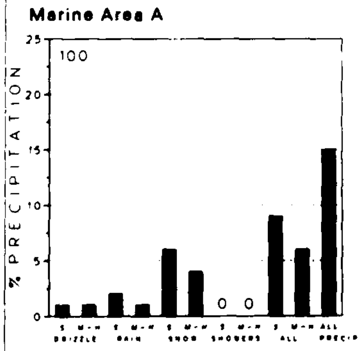
Sachs Harbour



Mould Bay



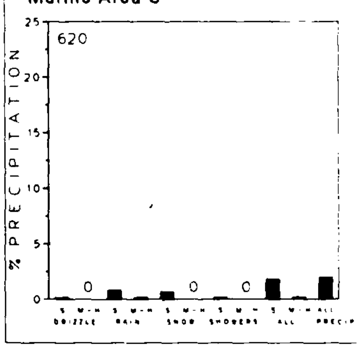
Marine Area A



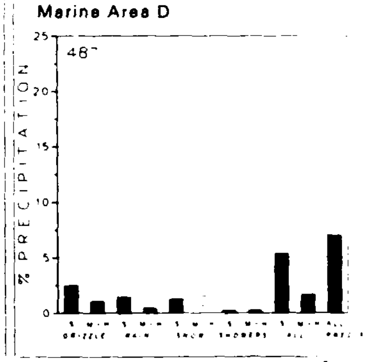
Marine Area B

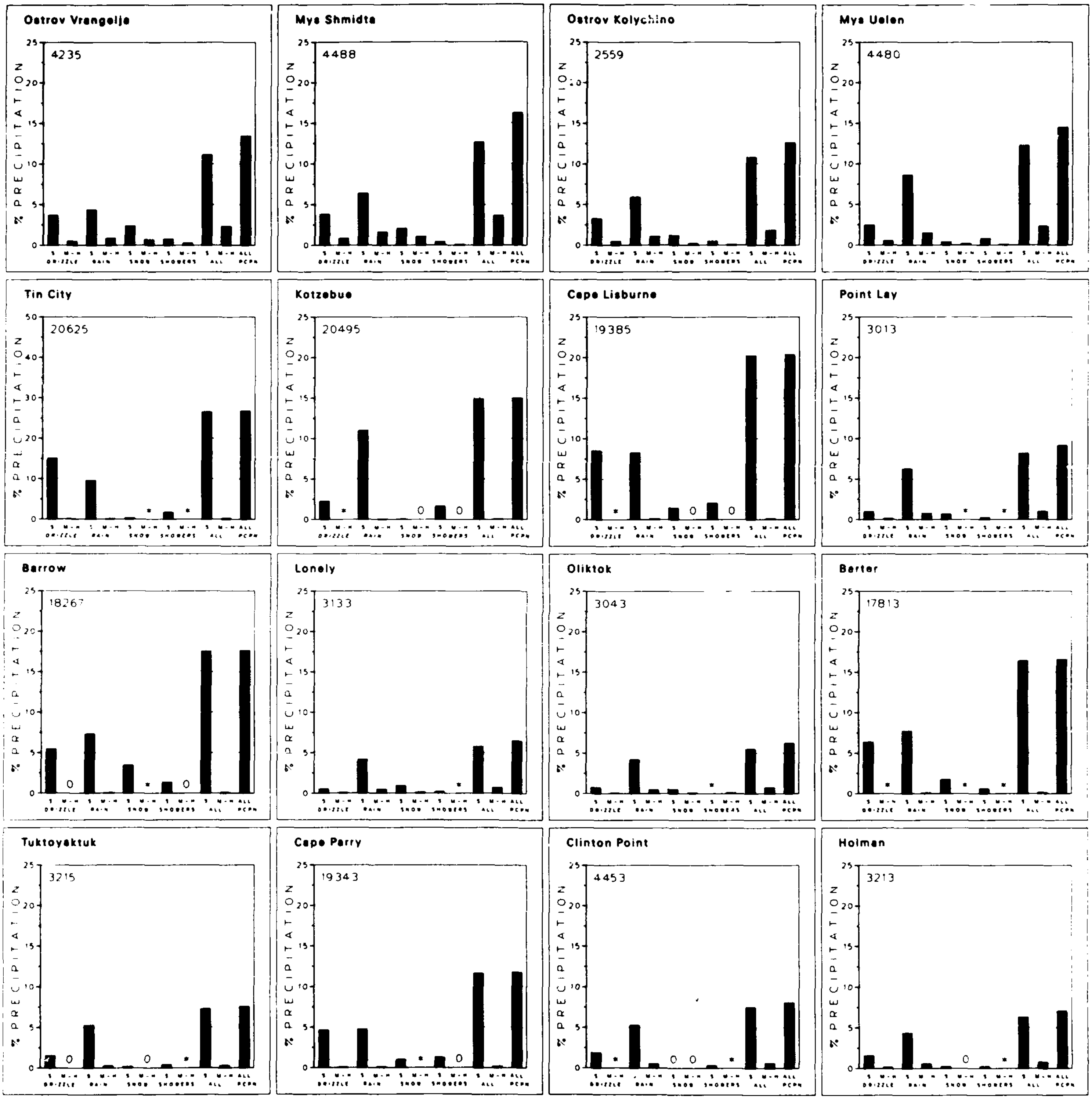
No Data Available

Marine Area C



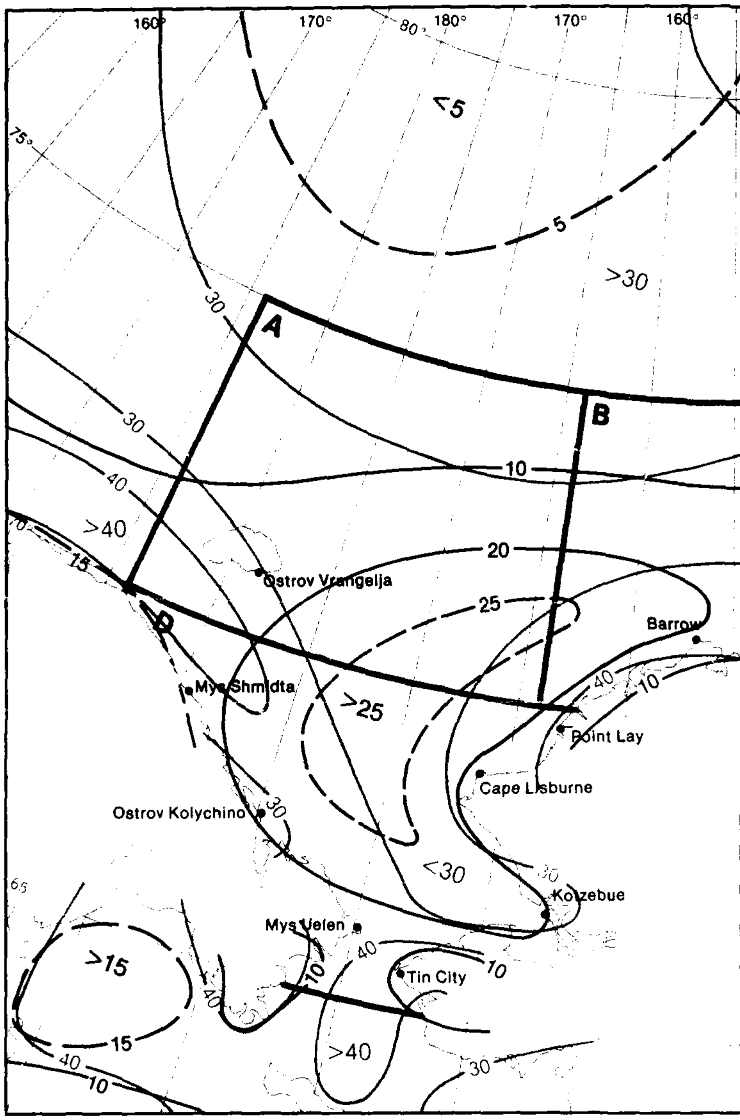
Marine Area D

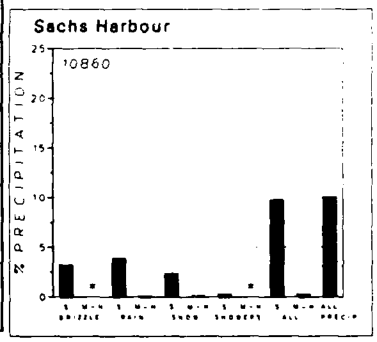


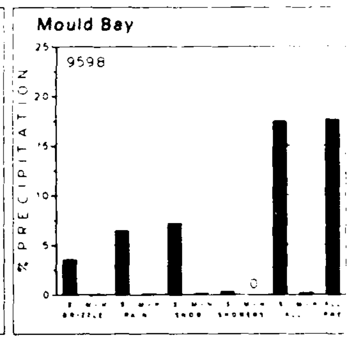


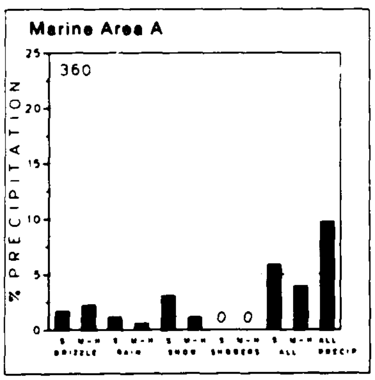
July

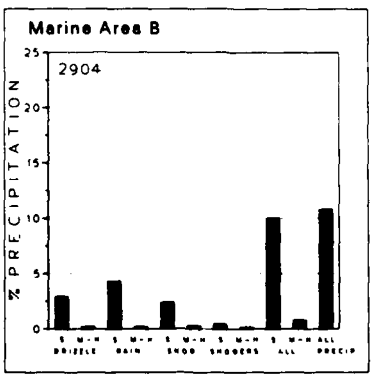
2 Precipitation Types

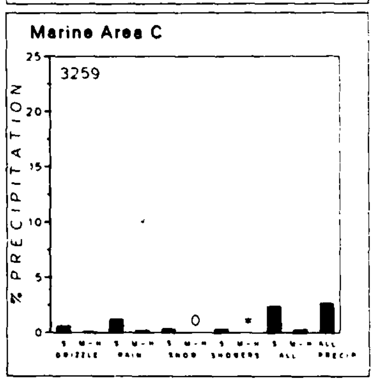


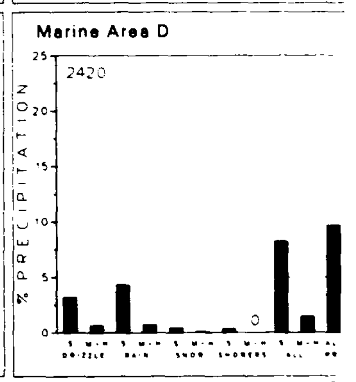








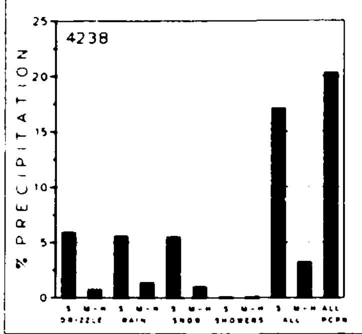




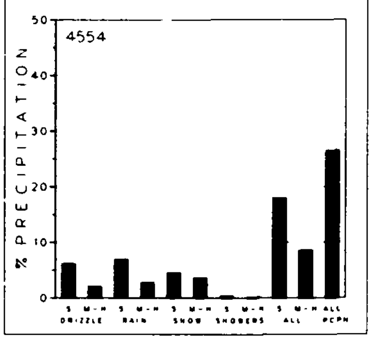
2 Wind-Visibility-Cloudiness

J

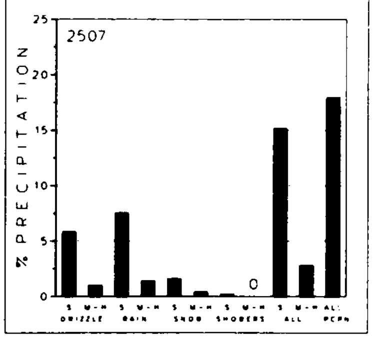
Ostrov Vrangelja



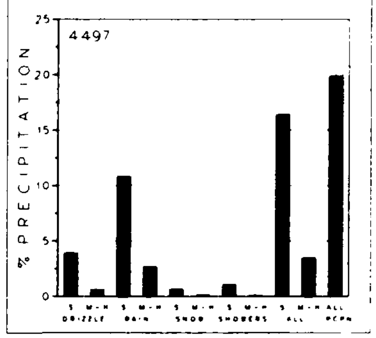
Mys Shmidta



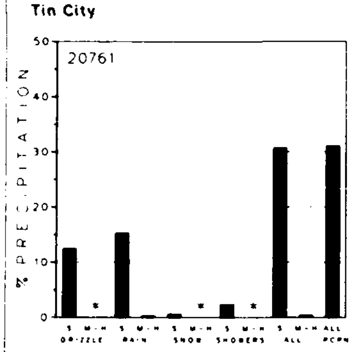
Ostrov Kolychino



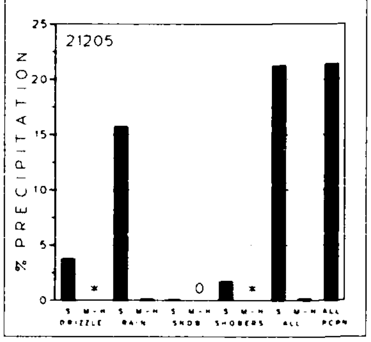
Mys Uelen



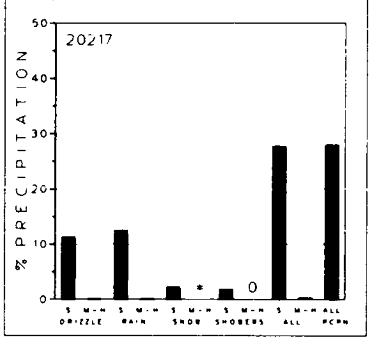
Tin City



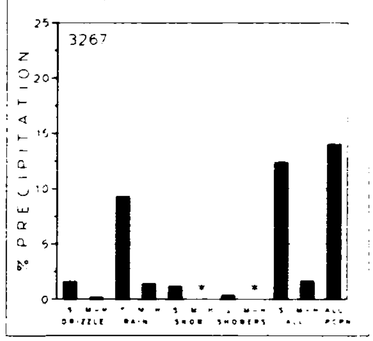
Kotzebue



Cape Lisburne



Point Lay



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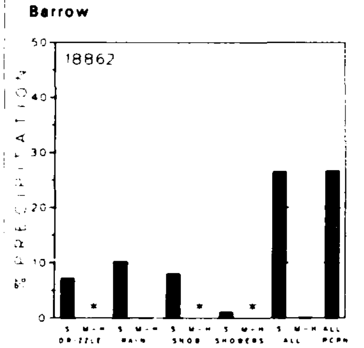
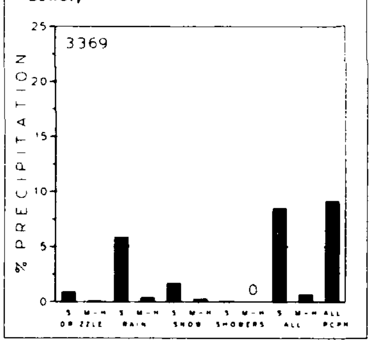
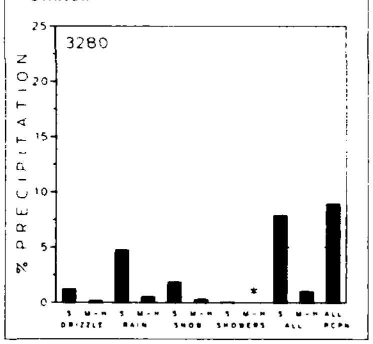


Lonely



Oliktok



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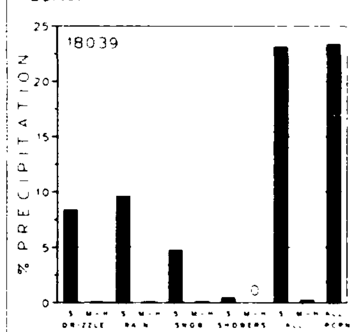
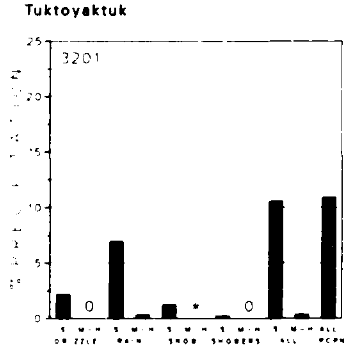


Tuktoyaktuk



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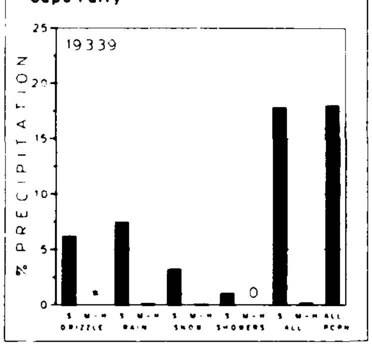
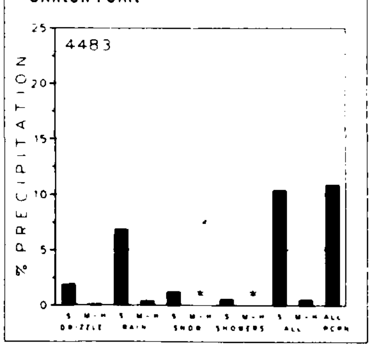
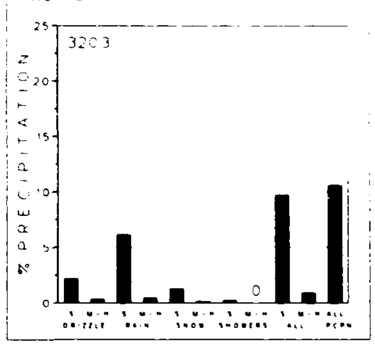
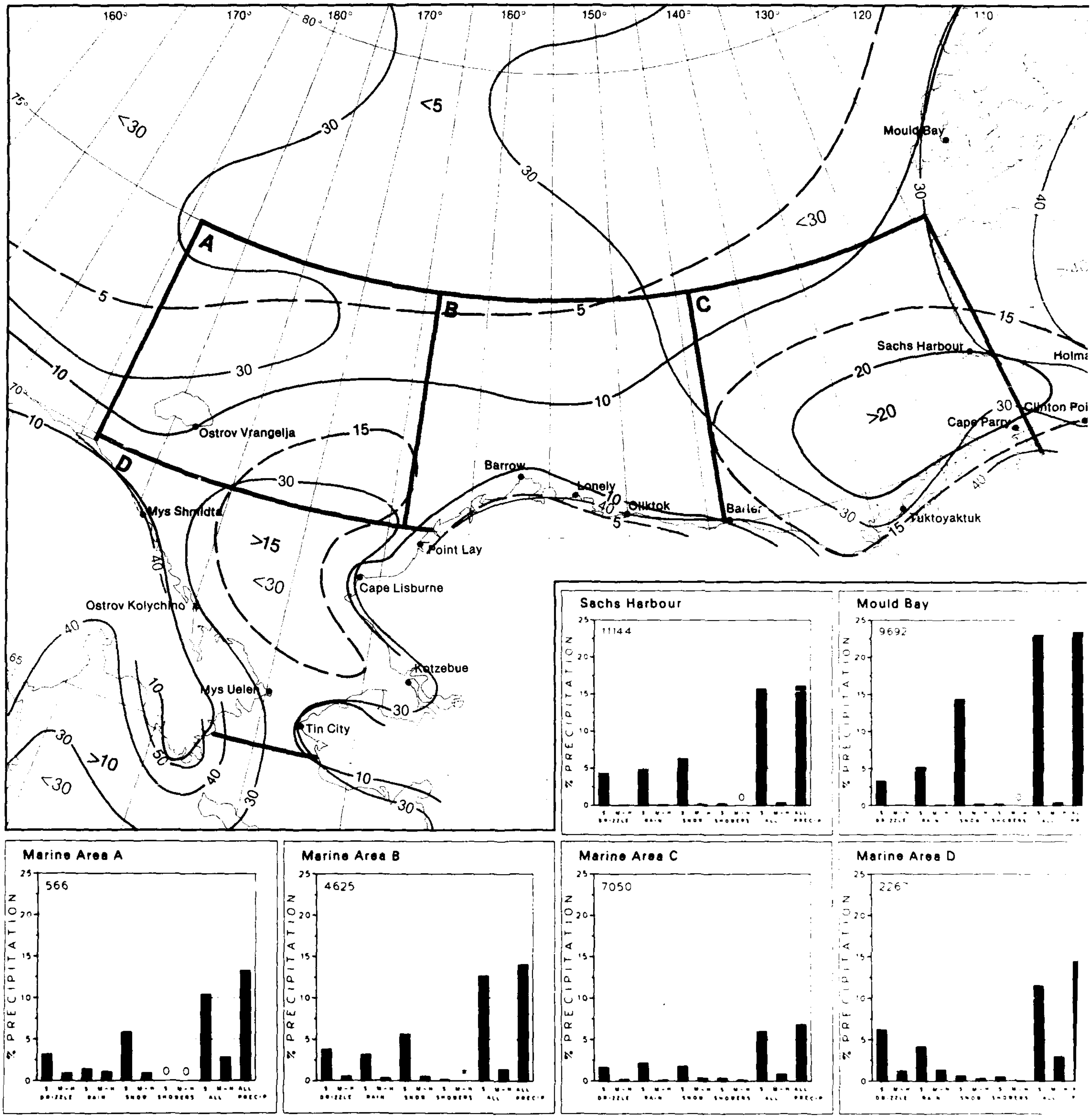


Clinton Point



Holman





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80°
180°
170°
160°
150°
140°
130°
120
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75°
70°
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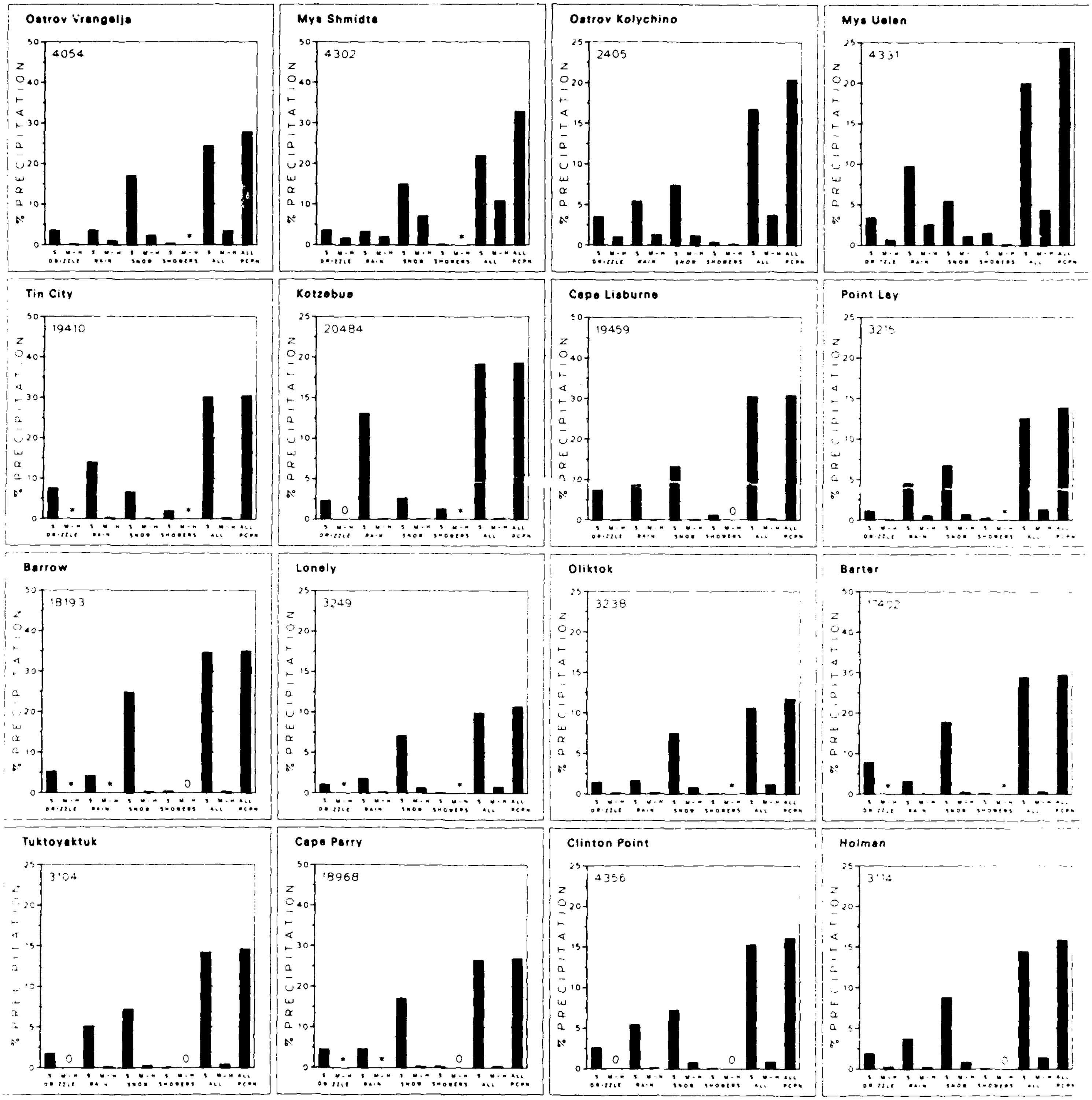
<5
30
A
B
C
D
5
10
15
20
>20
<30
>15
>10
40
50
Mould Bay
Sachs Harbour
Holma
Clinton Poi
Cape Parry
Tuktoyaktuk
Barter
Oliktok
Lonely
Barrow
Point Lay
Cape Lisburne
Kotzebue
Tin City
Mys Uelen
Ostrov Kolychino
Mys Shmidta
Ostrov Vrangelja
Sachs Harbour
11144
Mould Bay
9692
Marine Area A
566
Marine Area B
4625
Marine Area C
7050
Marine Area D
% PRECIPITATION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4302
Ostrov Kolychino
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Mys Uelen
Tin City
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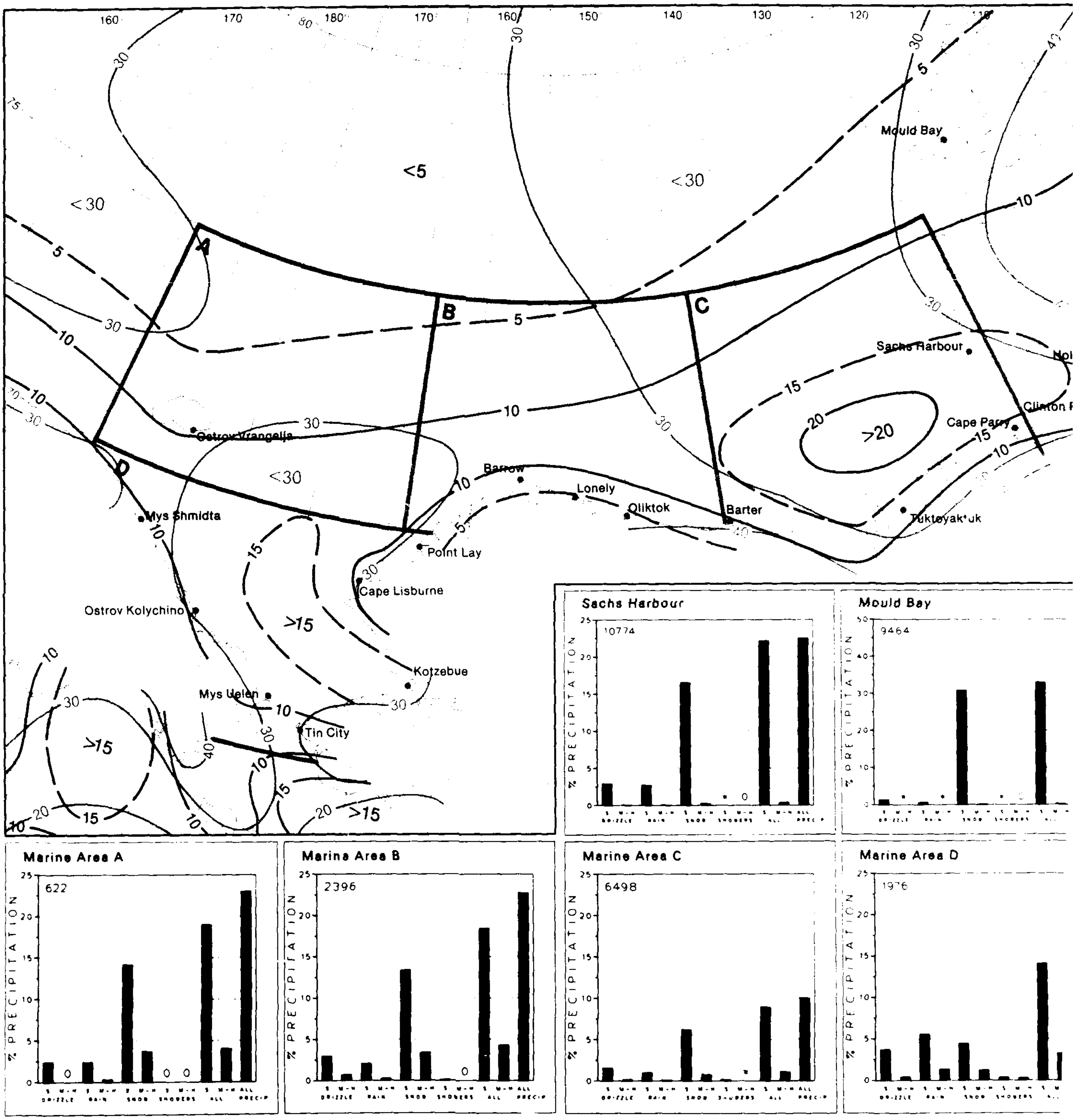
Kotzebue
20484
Cape Lisburne
19459
Point Lay
Barrow
18193
Lonely
3249
Oliktok
3238
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
4356
Holman
% PRECIPITATION
DRIZZLE
RAIN
SNOW
SHOWERS
ALL
PCPN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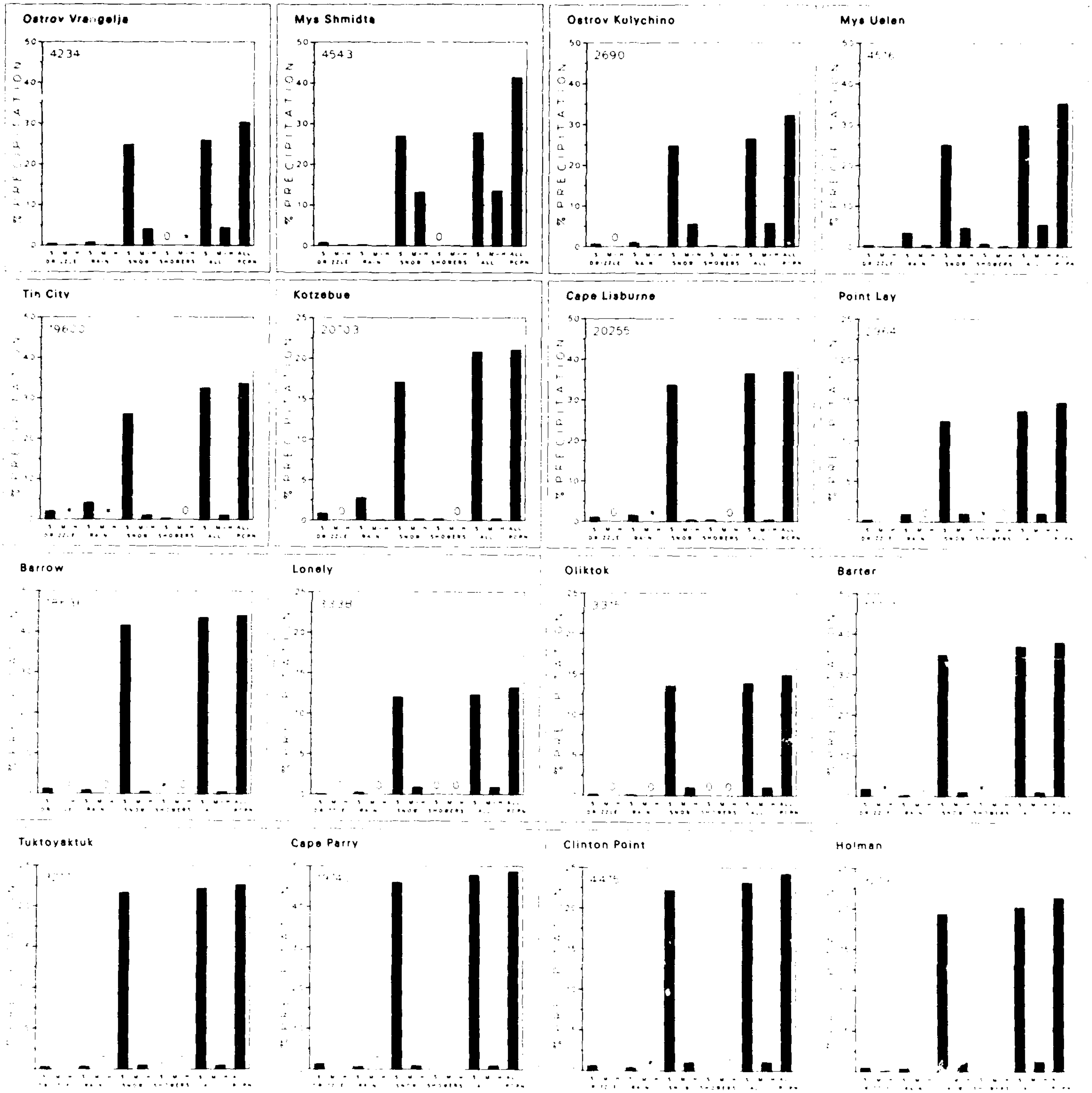
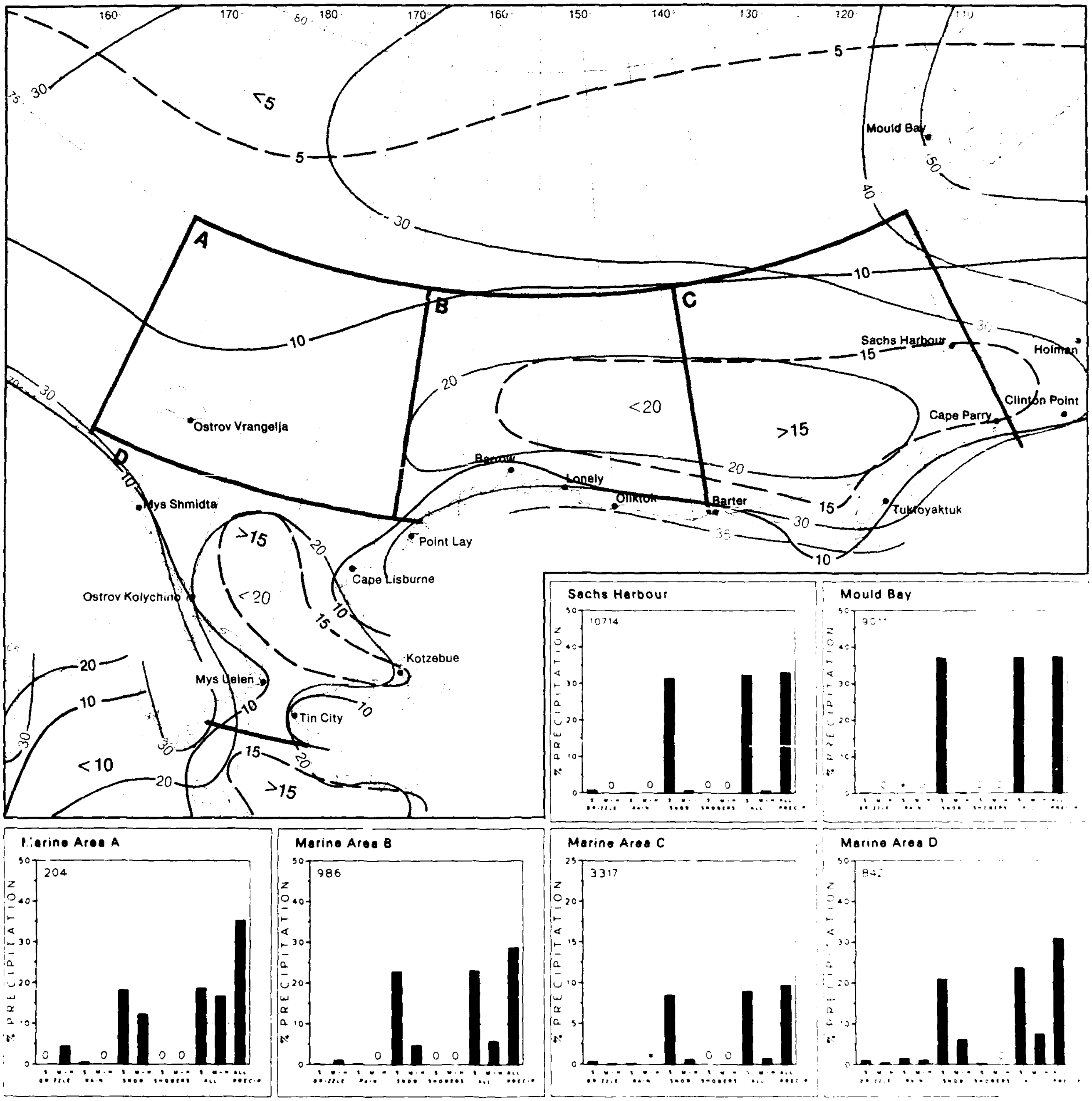
B
C
D
Mould Bay
Sachs Harbour
Cape Parry
Tuktoyaktuk
Barter
Oliktok
Lonely
Barrow
Point Lay
Cape Lisburne
Kotzebue
Tin City
Mys Uelen
Ostrov Kolychino
Mys Shmidta
Ostrov Vrangelja
Sachs Harbour
10774
Mould Bay
9464
Marine Area A
622
Marine Area B
2396
Marine Area C
6498
Marine Area D
1976
% PRECIPITATION



October

2 Precipitation Types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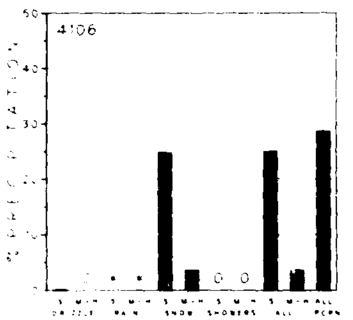
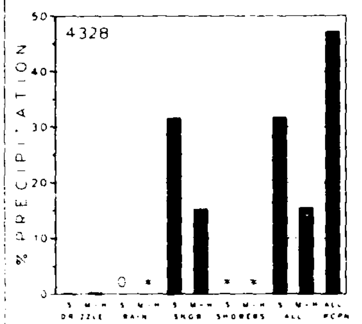
A
B
C
D
Mould Bay
40
Sachs Harbour
Holman
Clinton Point
Cape Parry
Ostrov Vrangelja
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Mys Shmidta
Point Lay
Cape Lisburne
Ostrov Kolychino
Kotzebue
Mys Uelen
Tin City
Sachs Harbour
10714
Mould Bay
Marine Area A
204
Marine Area B
986
Marine Area C
3317
Marine Area D
% PRECIPITATION

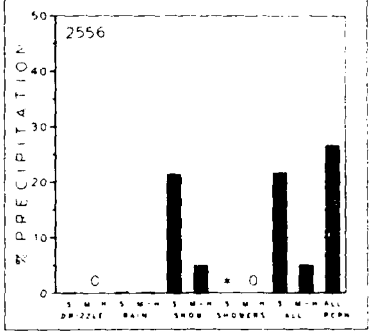
Ostrov Vrangelja



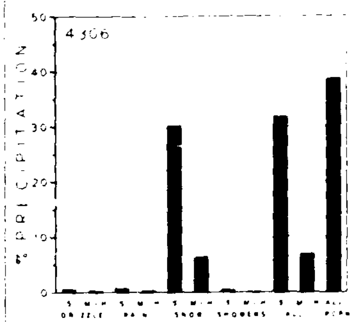
Mys Shmidta



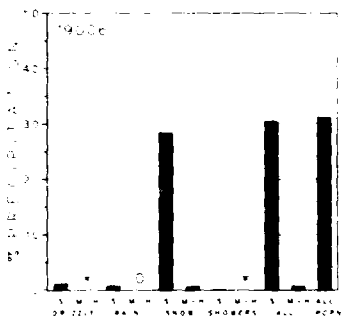
Ostrov Kolychino



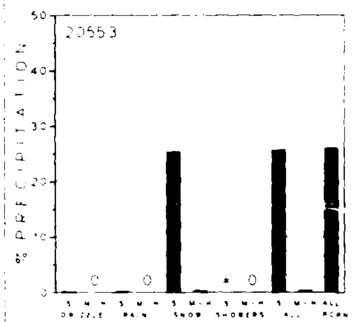
Mys Uelen



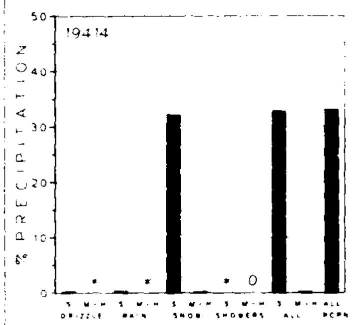
Tin City



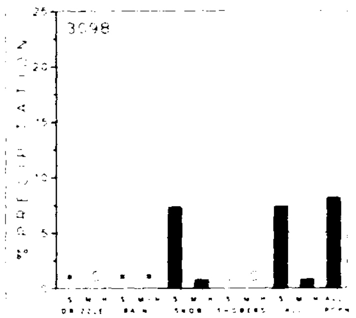
Kotzebue



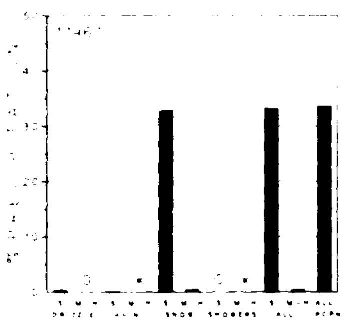
Cape Lisburne



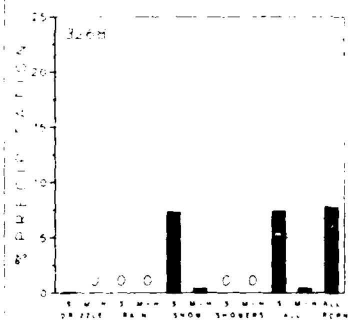
Point Lay



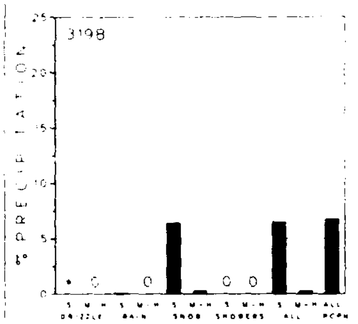
Barrow



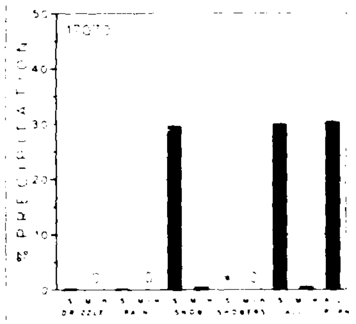
Lonely



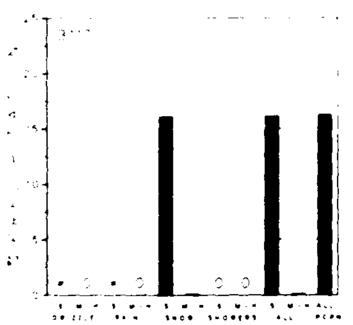
Oliktok



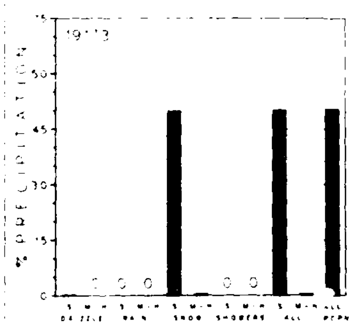
Barter



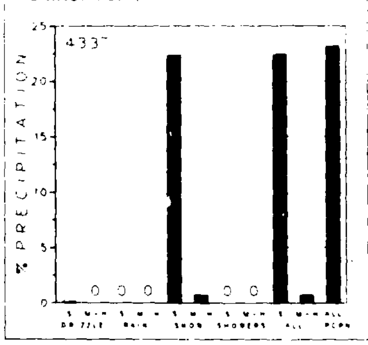
Tuktoyaktuk



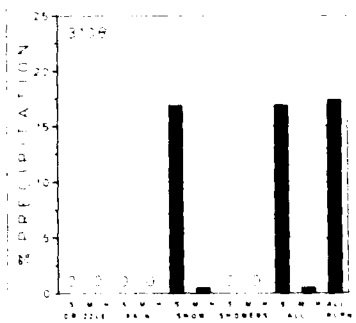
Cape Parry

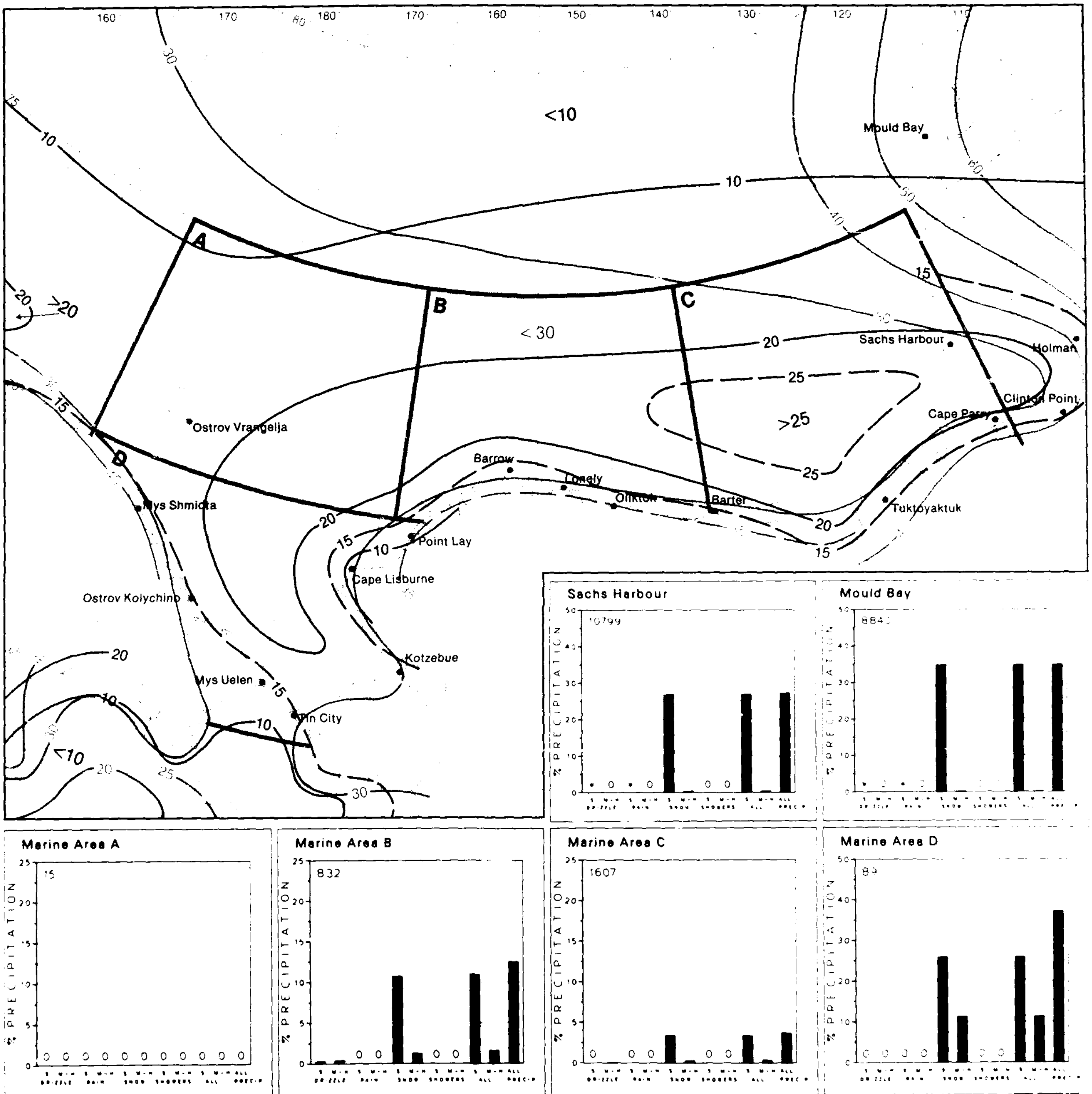


Clinton Point

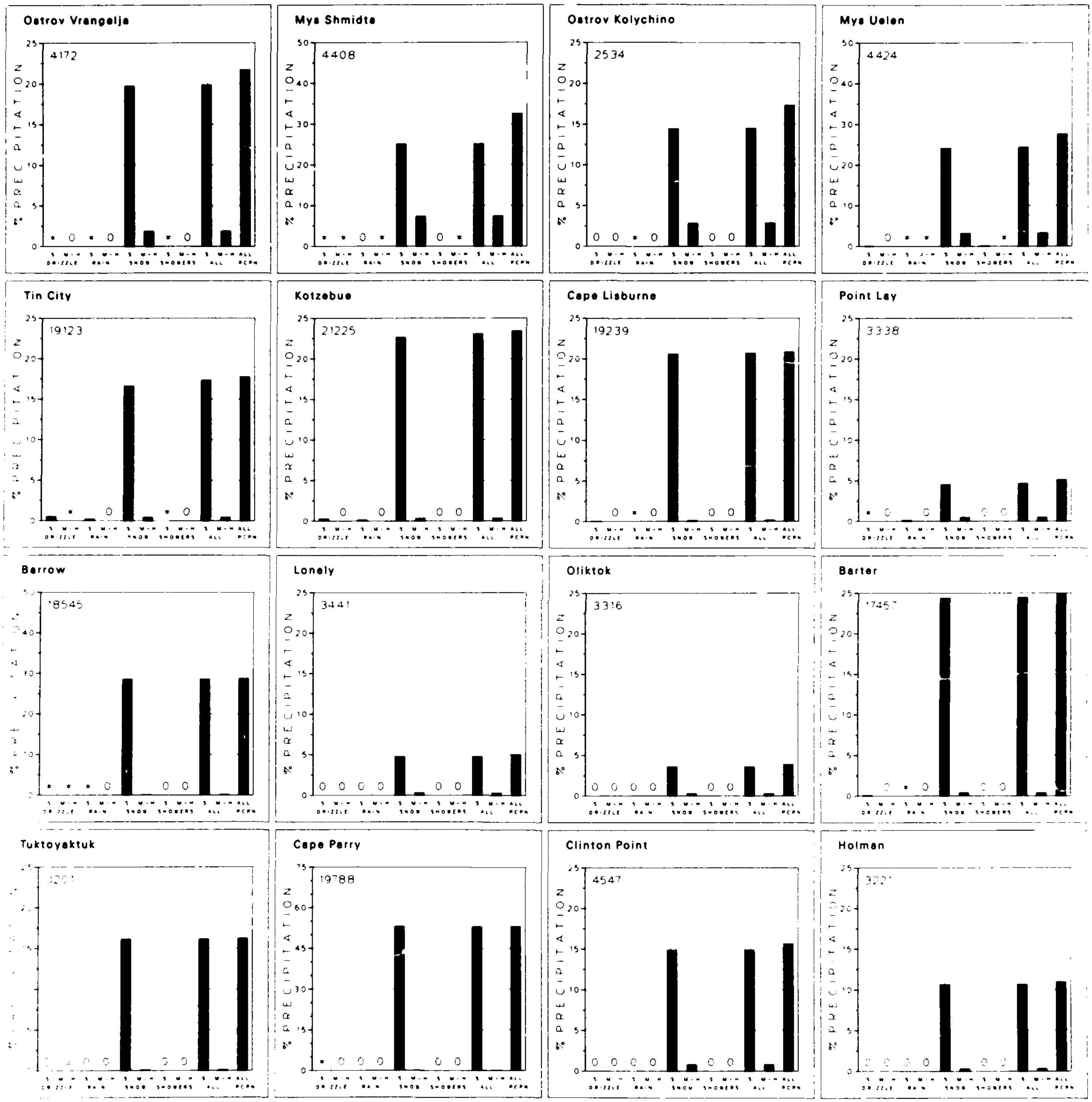


Holman

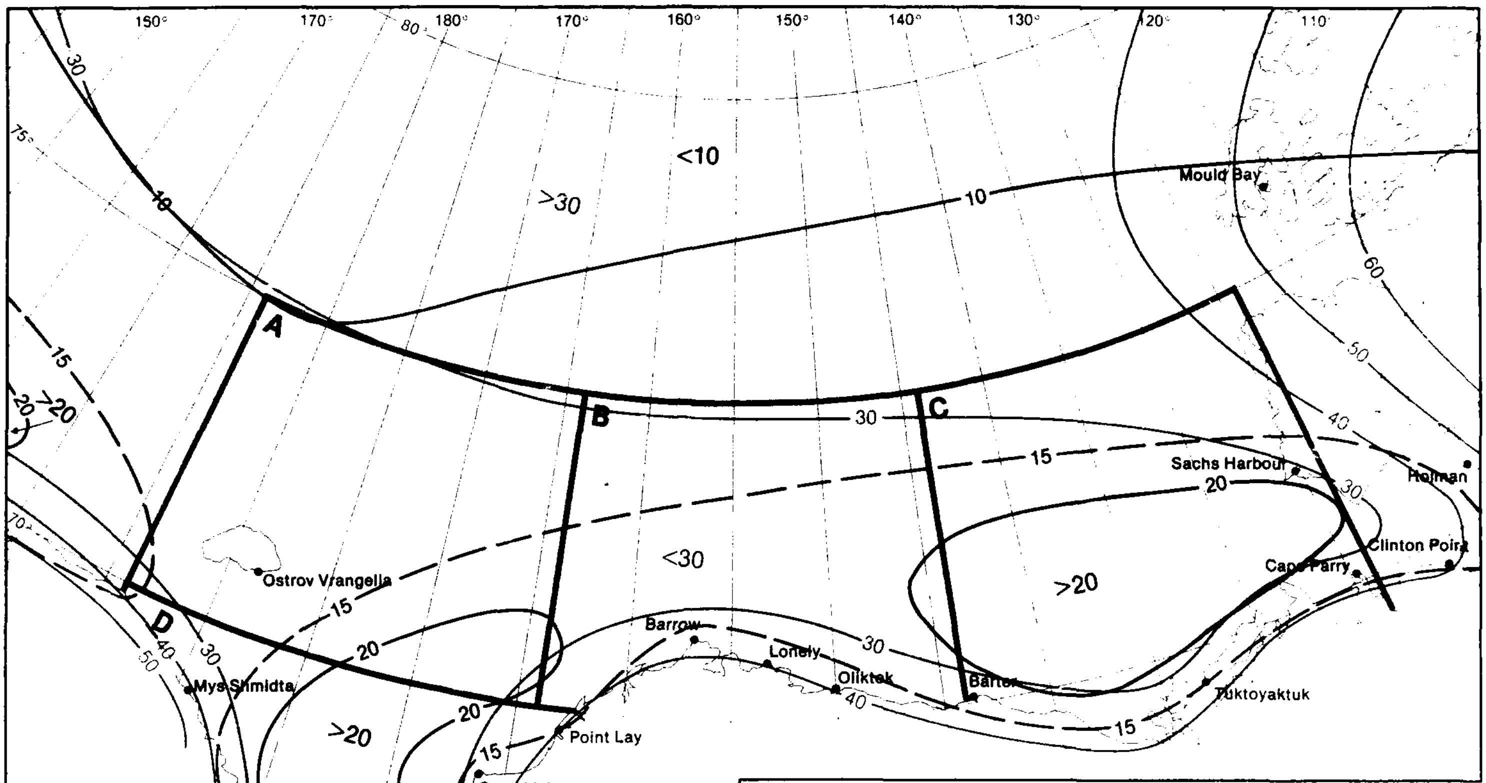




<10
Mould Bay
10
A
B
C
< 30
20
Sachs Harbour
Holman
25
>25
Clinton Point
Cape Parry
Ostrov Vrangelja
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Mys Shmidta
Point Lay
Cape Lisburne
Ostrov Kolychino
Kotzebue
Mys Uelen
Tin City
D
<10
Sachs Harbour
10799
Mould Bay
Marine Area A
15
Marine Area B
832
Marine Area C
1607
Marine Area D
% PRECIPITATION



Ostrov Vrangelja
4172
Mys Shmidta
4408
Ostrov Kolychino
2534
Mys Uelen
4424
Tin City
19123
Kotzebue
21225
Cape Lisburne
19239
Point Lay
3338
Barrow
18545
Lonely
3441
Oliktok
3316
Barter
Tuktoyaktuk
Cape Parry
19788
Clinton Point
4547
Holman
% PRECIPITATION
DRIZZLE
RAIN
SNOW
SHOWERS
ALL
PCPN


150°
170°
80
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120°
110°
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70°
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A
B
C
D
15
20
>20
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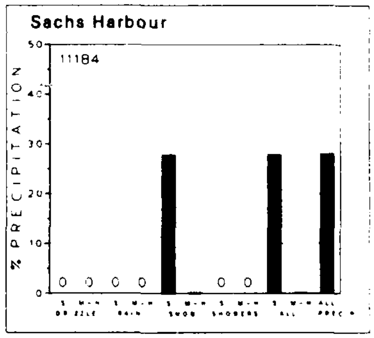
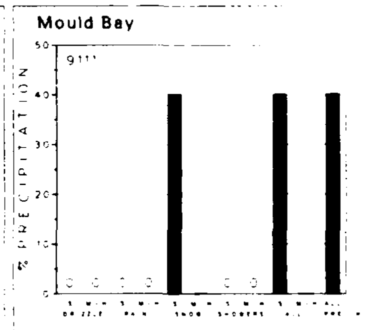
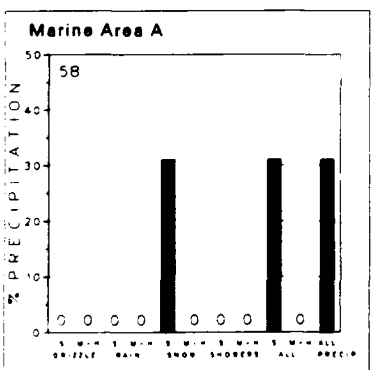
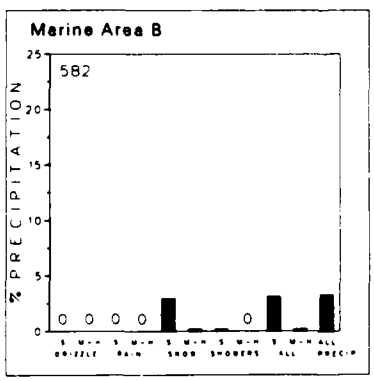
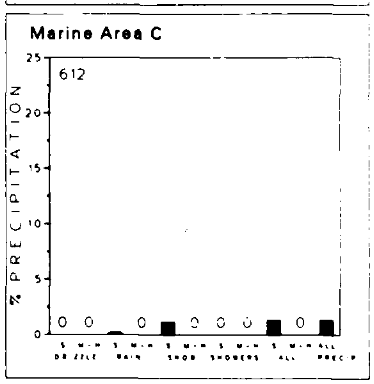
Mould Bay
Sachs Harbour
Holman
Clinton Point
Cape Parry
Ostrov Vrangelia
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Mys Shmidta
Point Lay
Cape Lisburne
Ostrov Kolychino
Kotzebue
Mys Uelen
Tin City
<10

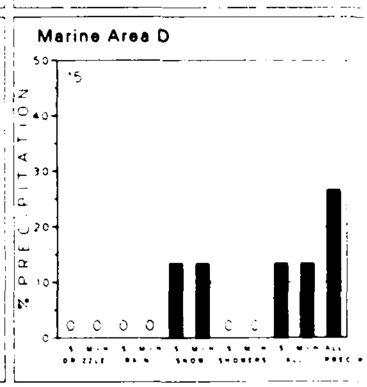

Sachs Harbour
11184
% PRECIPITATION


Mould Bay
% PRECIPITATION


Marine Area A
58
% PRECIPITATION


Marine Area B
582
% PRECIPITATION


Marine Area C
612
% PRECIPITATION


Marine Area D
% PRECIPITATION

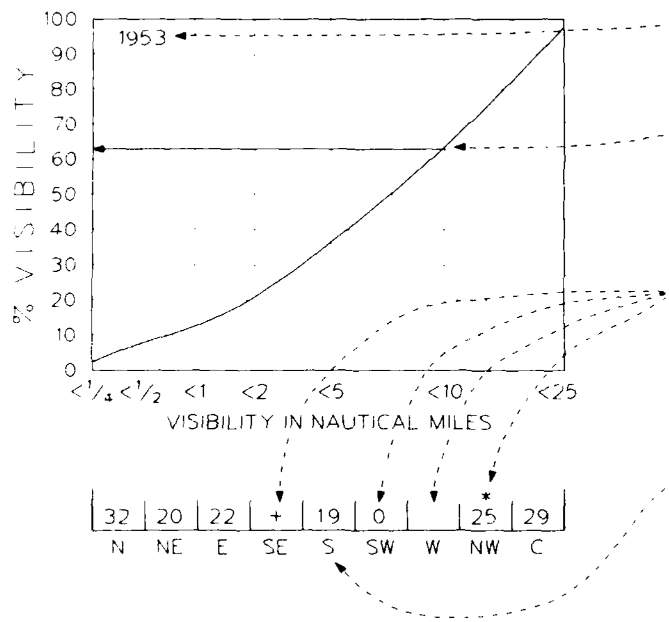
Map 3. Ceiling/visibility (low range)

BLACK LINE – Percent frequency of low cloud ceiling (LCC) <300 feet and/or visibility < 1 nautical mile.

BLUE LINE – Percent frequency of LCC <600 feet and/or visibility <2 nautical miles.

Albers Equal–Area Conic Projection

Graphs: Visibility/wind direction



Number of observations.

Curve is the cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(63% of all visibilities reported were <10 nautical miles.)

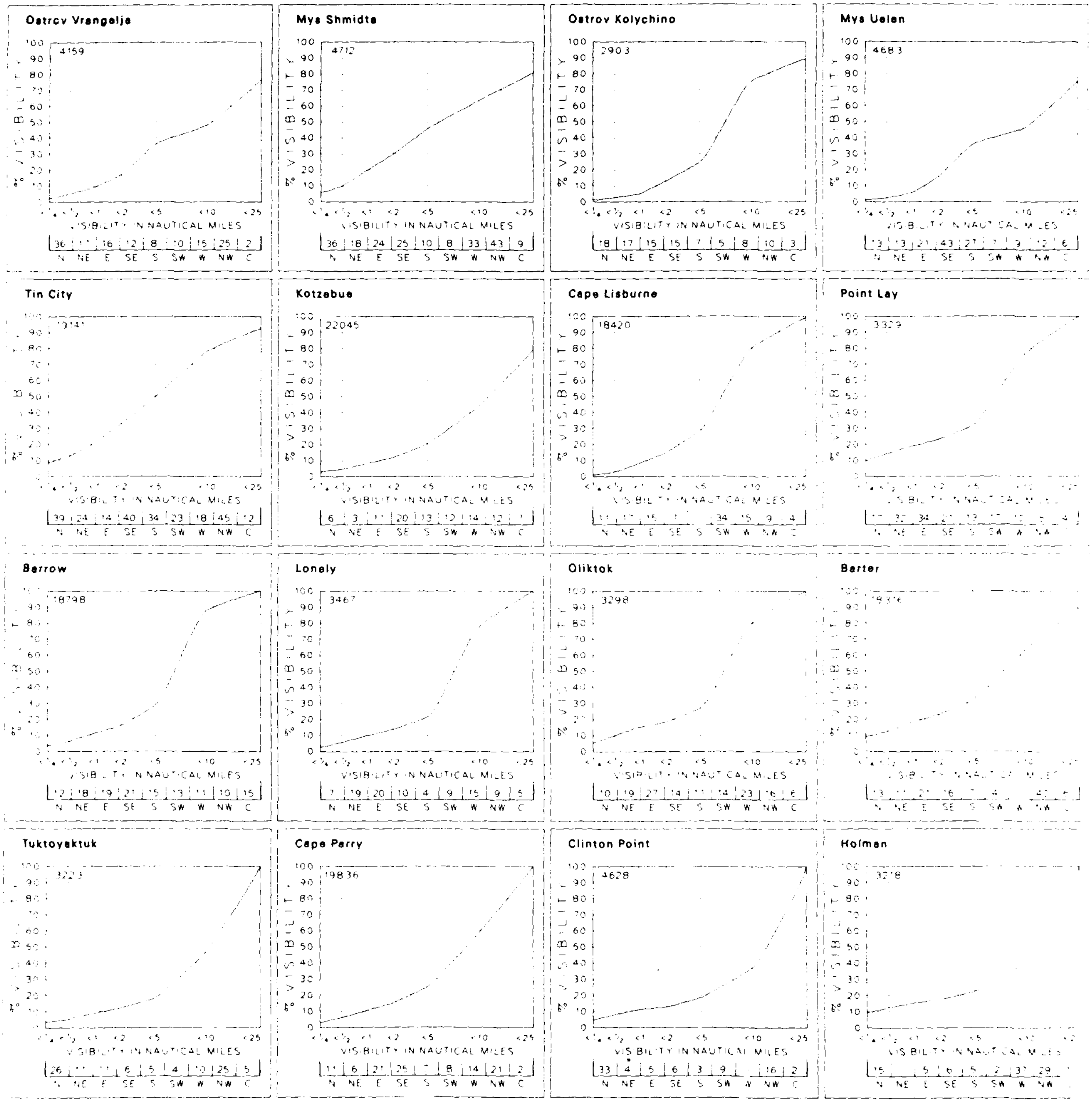
The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

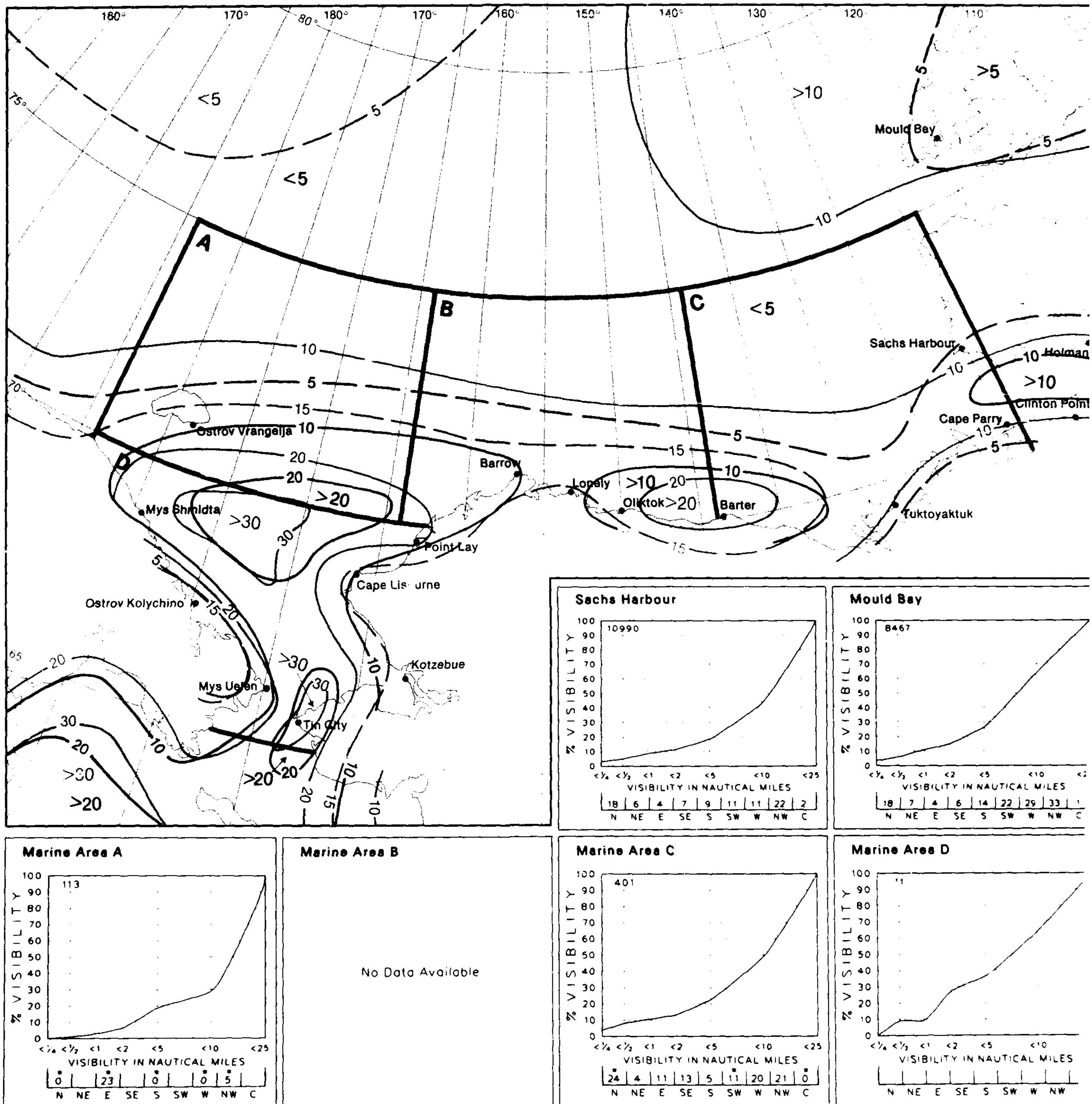
+ indicates <.5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(19% of all S winds were accompanied by visibilities <2 nautical miles.)

The percent frequency of visibilities equal to or greater than a given value can be obtained from the graph by subtracting the cumulative percent frequency of that value from 100%. Refer to the text in Set 5 for descriptive information on visibility.

Aircraft-type ceilings are not available from marine observations. The ceilings are estimated from the height of the lowest cloud when low clouds (heights of less than 8,000 feet) cover more than half the sky. When the sky is totally obscured by snow, rain, fog, or other phenomena, the total obscuration is considered a ceiling with a height of zero. Refer to the texts in Sets 4 and 6 for additional information on clouds.

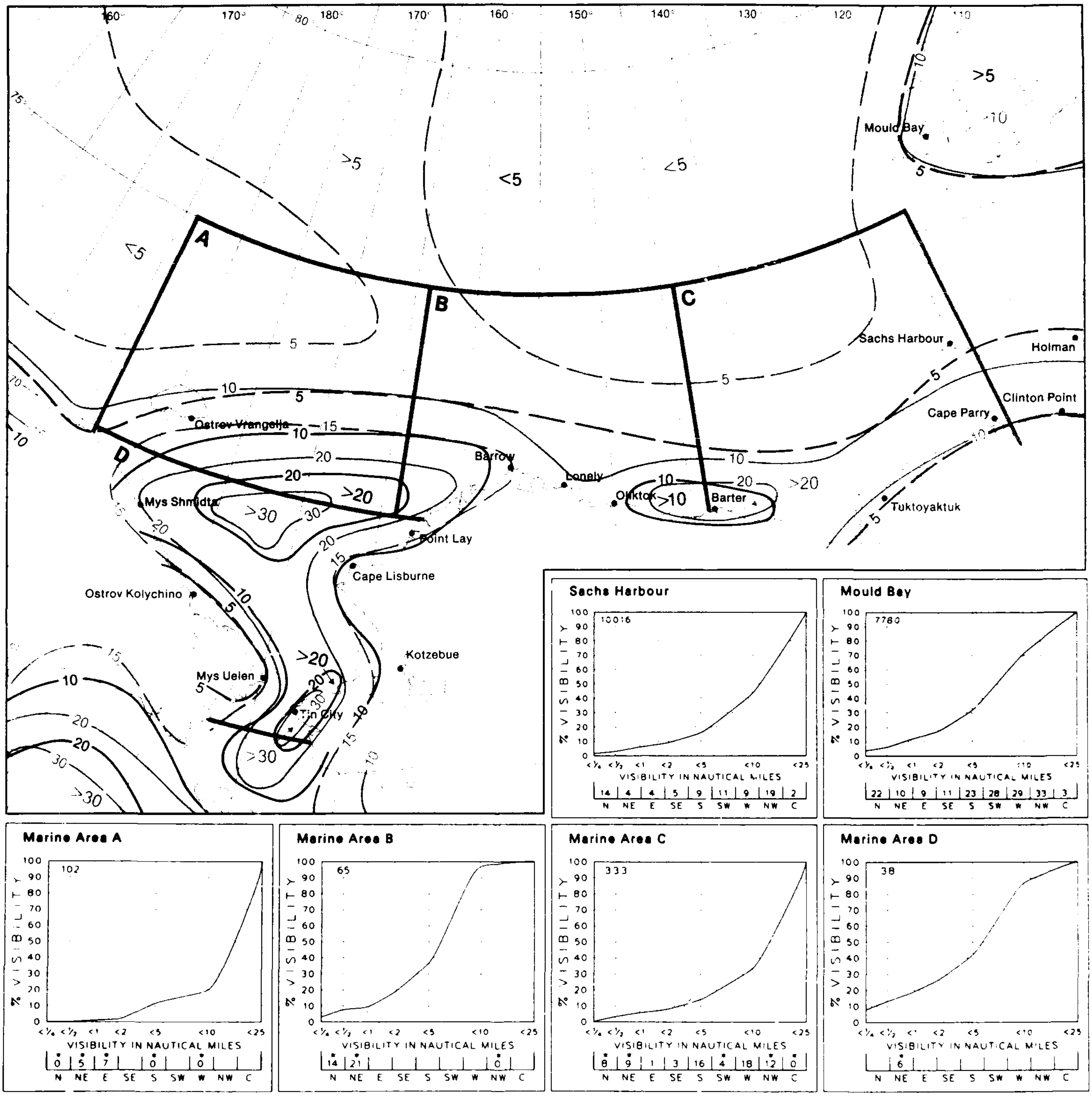

Ostrov Vrangelja
4159
Mys Shmidta
4712
36 18 24 25 10 8 33 43 9
Ostrov Kolychino
2903
18 17 15 15 7 5 8 10 3
Mys Uelen
4683
Tin City
39 24 14 40 34 23 18 45 12
Kotzebue
22045
Cape Lisburne
18420
Point Lay
Barrow
18798
12 18 19 21 15 13 11 10 15
Lonely
7 19 20 10 4 9 15 9 5
Oliktok
3298
Barter
Tuktoyaktuk
Cape Parry
19836
11 6 21 25 7 8 14 21 2
Clinton Point
4628
Holman
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

Janu

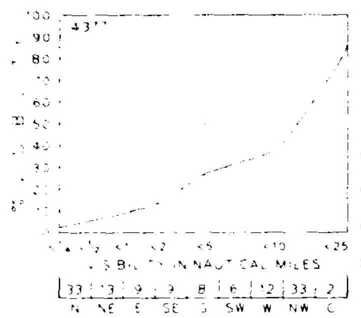

Ostrov Vrangelja
3893
VISIBILITY IN NAUTICAL MILES
Mys Shmidta
4372
VISIBILITY IN NAUTICAL MILES
26 24 23 16 3 4 31 47 4
N NE E SE S SW W NW C
Ostrov Kolychino
2779
VISIBILITY IN NAUTICAL MILES
Mys Uelen
4363
Tin City
Kotzebue
19710
Cape Lisburne
16968
Point Lay
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
4240
Holman



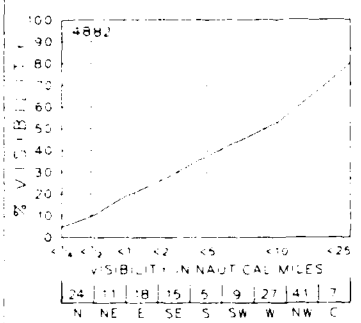
3 Ceiling and Visibility (low range)

February

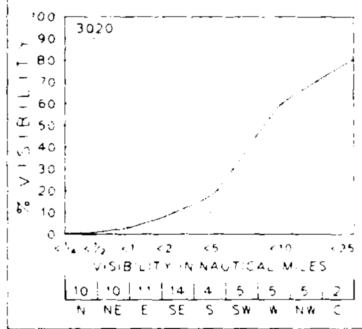
Ostrov Vrangelja



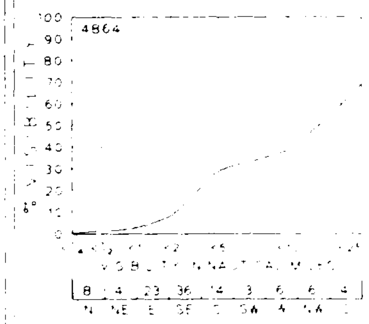
Mys Shmidta



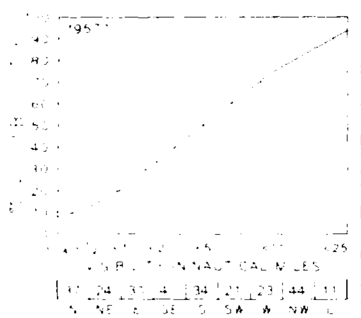
Ostrov Kolychino



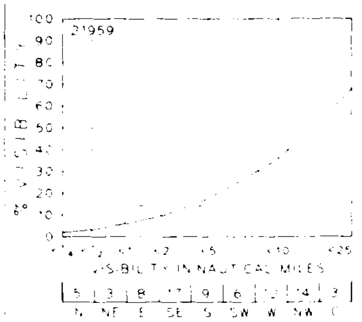
Mys Uelen



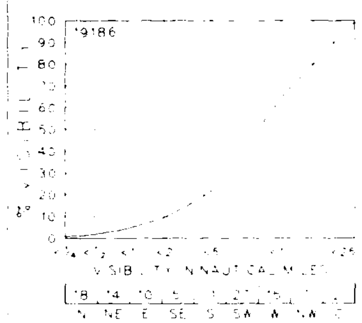
Tin City



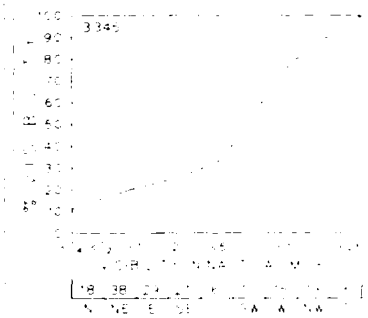
Kotzebue



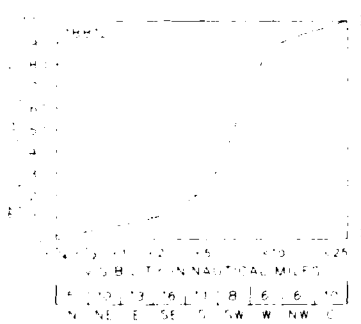
Cape Lisburne



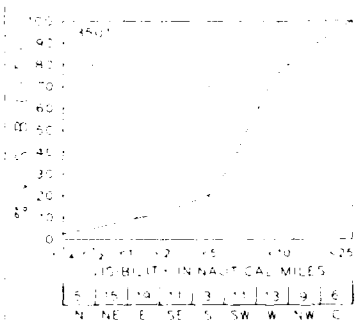
Point Lay



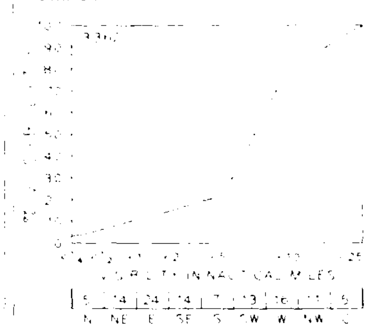
Barrow



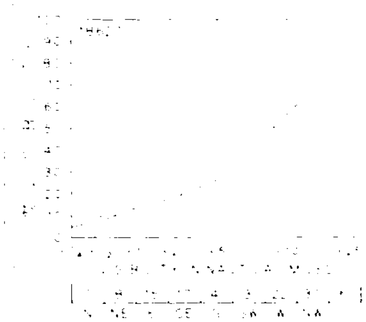
Lonely



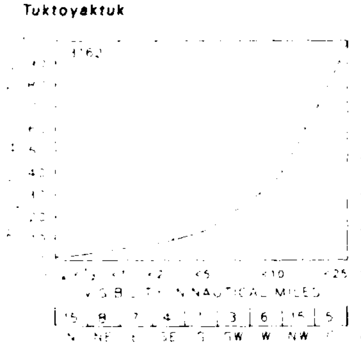
Oliktok



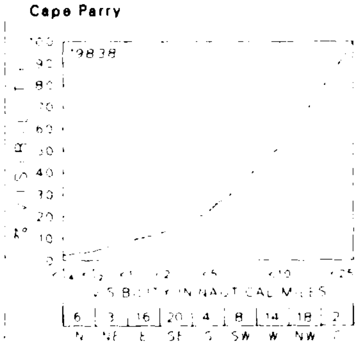
Barter



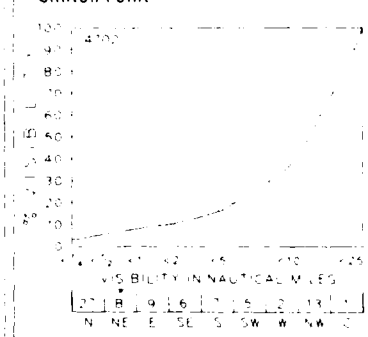
Tuktoyaktuk



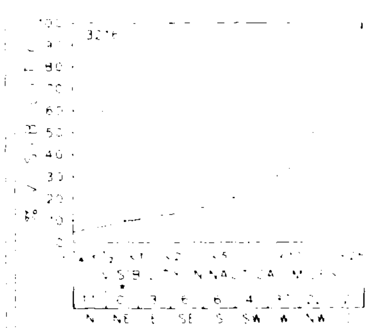
Cape Parry

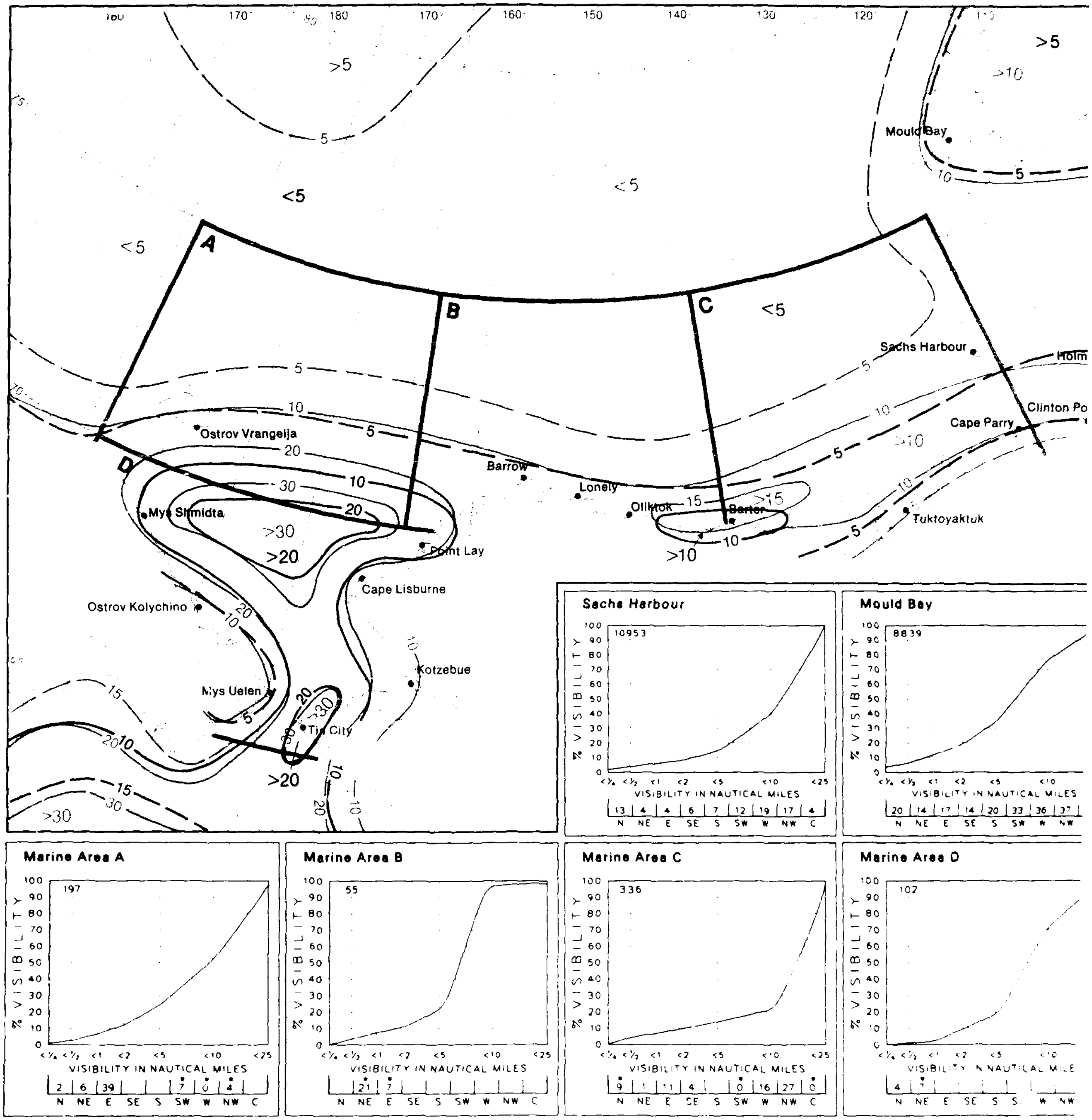


Clinton Point



Holman

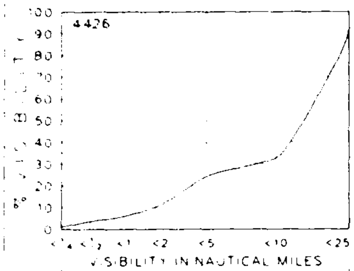




3 Ceiling and Visibility (low range)

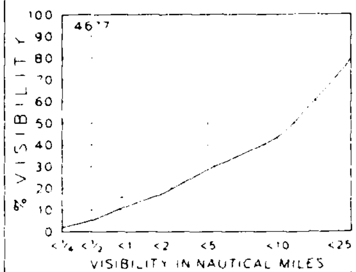
Ma

Ostrov Vrangelja



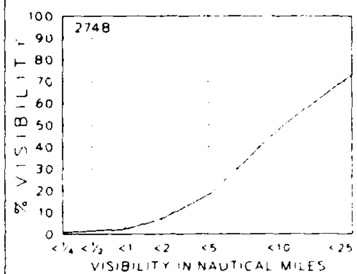
N	NE	E	SE	S	SW	W	NW	C
28	13	9	6	3	2	4	13	2

Mys Shmidta



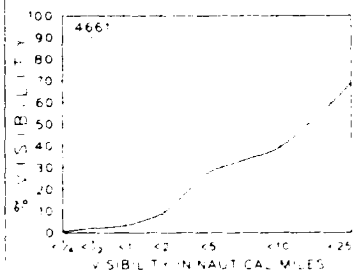
N	NE	E	SE	S	SW	W	NW	C
17	14	9	11	5	5	15	29	8

Ostrov Kolychino



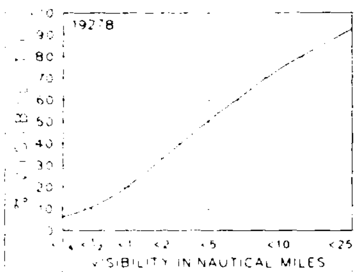
N	NE	E	SE	S	SW	W	NW	C
10	14	9	9	2	0	2	3	5

Mys Uelen



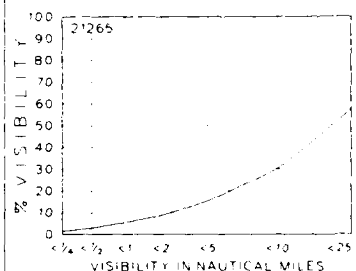
N	NE	E	SE	S	SW	W	NW	C
8	9	22	25	[illegible]	4	[illegible]	[illegible]	6

Tin City



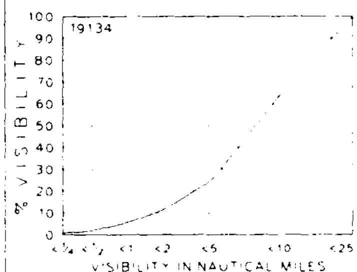
N	NE	E	SE	S	SW	W	NW	C
36	[illegible]	22	40	38	27	20	[illegible]	11

Kotzebue



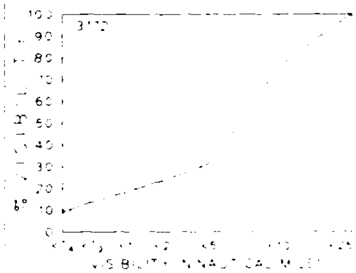
N	NE	E	SE	S	SW	W	NW	C
3	2	8	14	15	9	8	7	10

Cape Lisburne



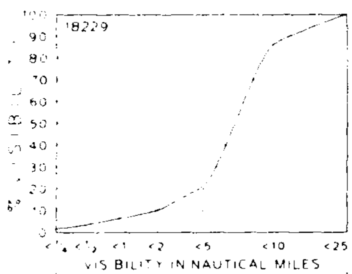
N	NE	E	SE	S	SW	W	NW	C
5	[illegible]	10	7	20	28	20	11	5

Point Lay



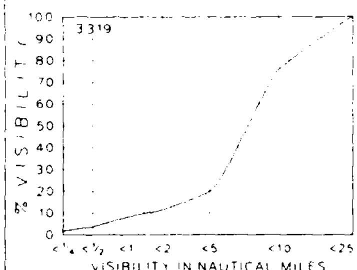
N	NE	E	SE	S	SW	W	NW	C
[illegible]	32	30	20	9	15	13	16	[illegible]

Barrow



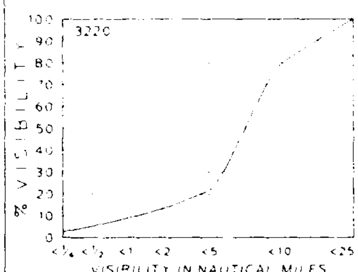
N	NE	E	SE	S	SW	W	NW	C
4	9	12	15	10	8	9	[illegible]	9

Lonely



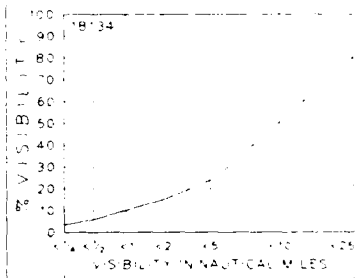
N	NE	E	SE	S	SW	W	NW	C
7	12	15	10	8	9	13	14	6

Oliktok



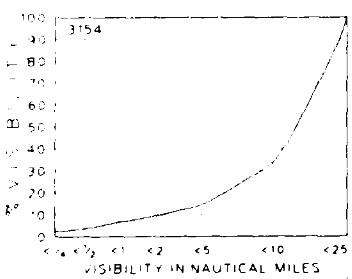
N	NE	E	SE	S	SW	W	NW	C
12	14	18	8	7	6	11	14	13

Barter



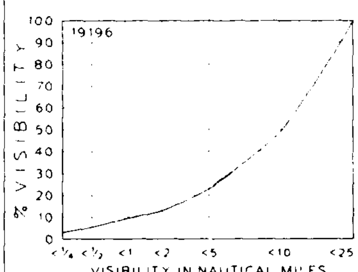
N	NE	E	SE	S	SW	W	NW	C
[illegible]	13	14	16	5	6	16	26	[illegible]

Tuktoyaktuk



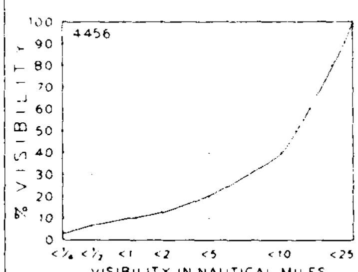
N	NE	E	SE	S	SW	W	NW	C
19	9	10	6	2	5	8	12	10

Cape Parry



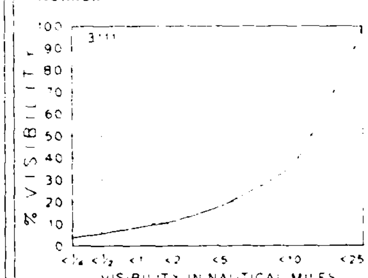
N	NE	E	SE	S	SW	W	NW	C
9	9	18	21	4	6	9	10	8

Clinton Point

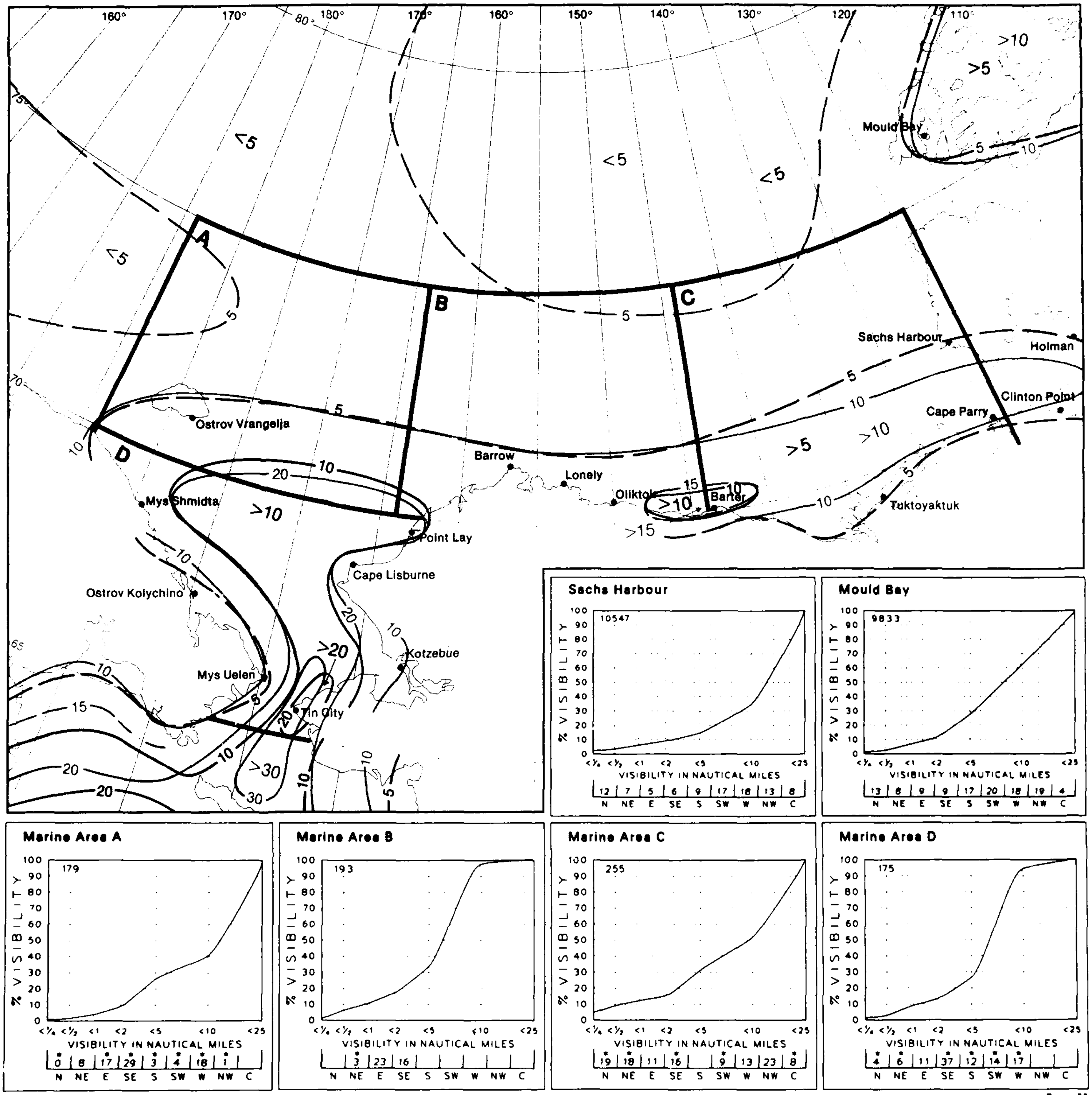


N	NE	E	SE	S	SW	W	NW	C
30	37	18	7	5	3	4	18	6

Holman

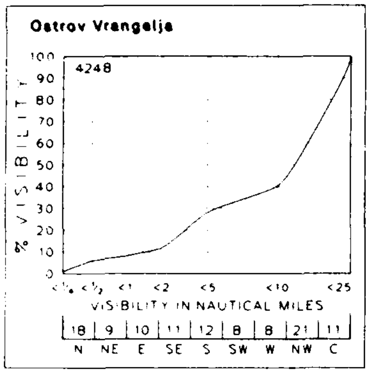


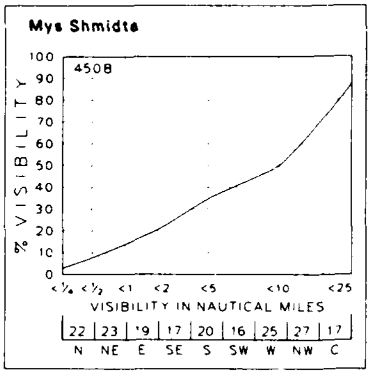
N	NE	E	SE	S	SW	W	NW	C
15	18	23	10	7	4	17	18	4

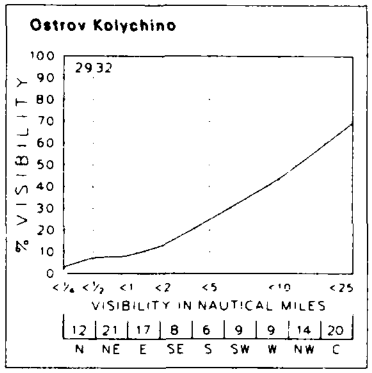


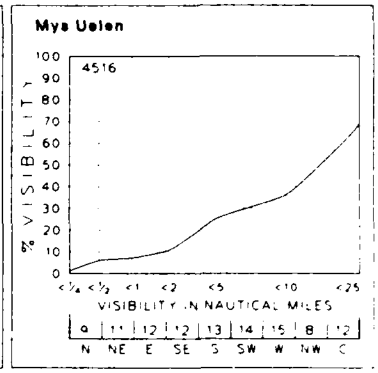
3 Ceiling and Visibility (low range)

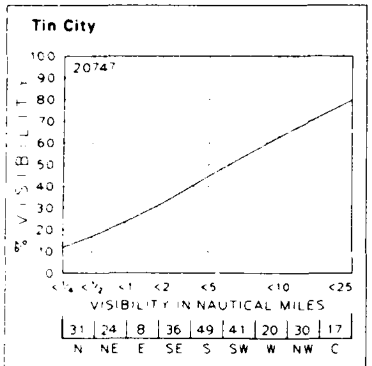
April

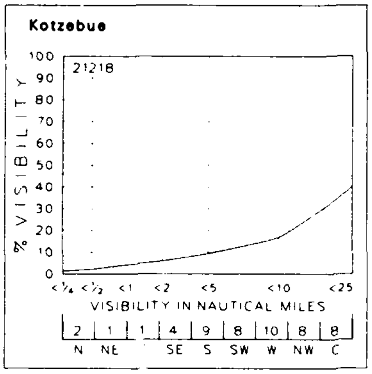

Ostrov Vrangelja
4248
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
18 | 9 | 10 | 11 | 12 | 8 | 8 | 21 | 11
N NE E SE S SW W NW C

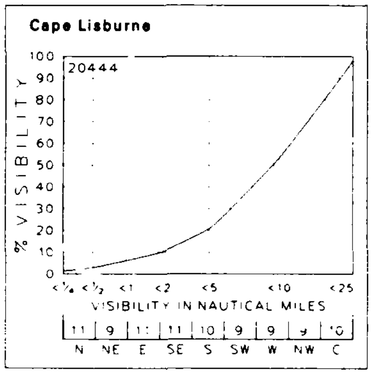

Mys Shmidta
4508
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
22 | 23 | 19 | 17 | 20 | 16 | 25 | 27 | 17
N NE E SE S SW W NW C

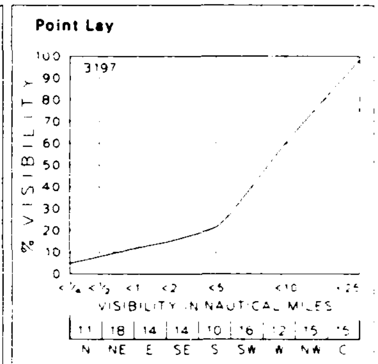

Ostrov Kolychino
2932
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
12 | 21 | 17 | 8 | 6 | 9 | 9 | 14 | 20
N NE E SE S SW W NW C

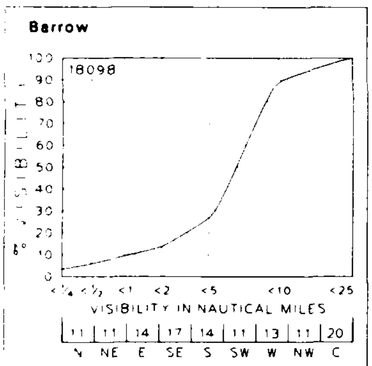

Mys Uelen
4516
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
9 | 11 | 12 | 12 | 13 | 14 | 15 | 8 | 12
N NE E SE S SW W NW C

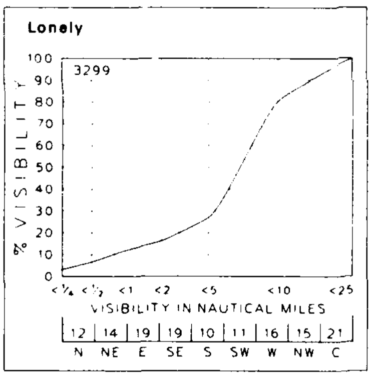

Tin City
20747
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
31 | 24 | 8 | 36 | 49 | 41 | 20 | 30 | 17
N NE E SE S SW W NW C

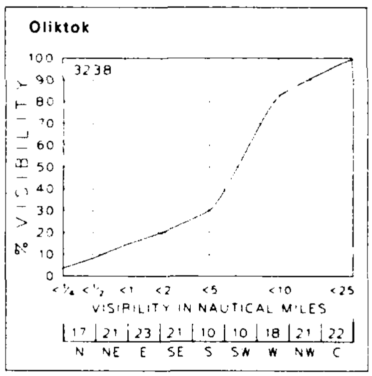

Kotzebue
21218
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
2 | 1 | 1 | 4 | 9 | 8 | 10 | 8 | 8
N NE SE S SW W NW C

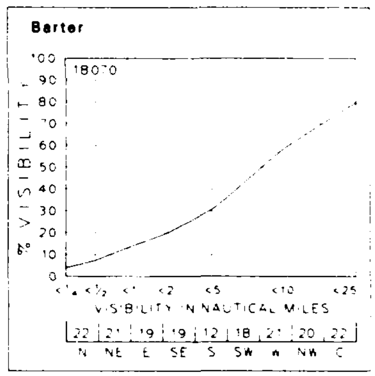

Cape Lisburne
20444
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
11 | 9 | 11 | 11 | 10 | 9 | 9 | 9 | 10
N NE E SE S SW W NW C

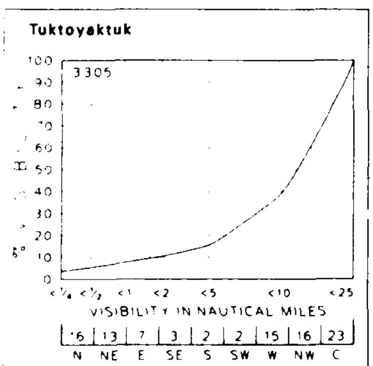

Point Lay
3197
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
11 | 18 | 14 | 14 | 10 | 16 | 12 | 15 | 15
N NE E SE S SW W NW C

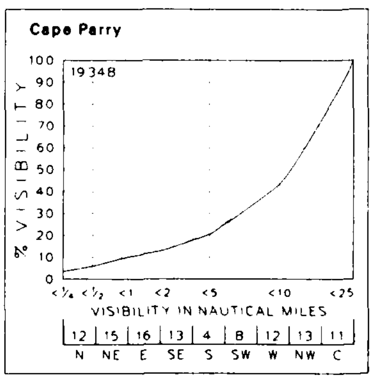

Barrow
18098
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
11 | 11 | 14 | 17 | 14 | 11 | 13 | 11 | 20
N NE E SE S SW W NW C

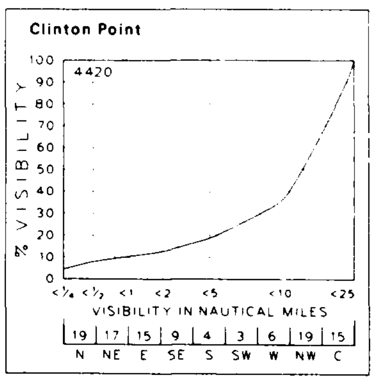

Lonely
3299
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
12 | 14 | 19 | 19 | 10 | 11 | 16 | 15 | 21
N NE E SE S SW W NW C

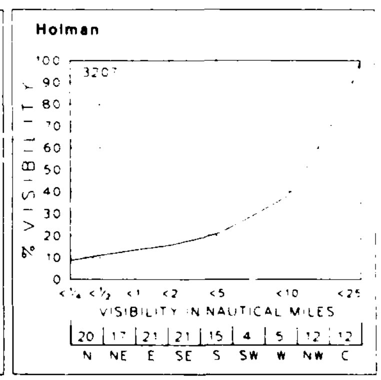

Oliktok
3238
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
17 | 21 | 23 | 21 | 10 | 10 | 18 | 21 | 22
N NE E SE S SW W NW C

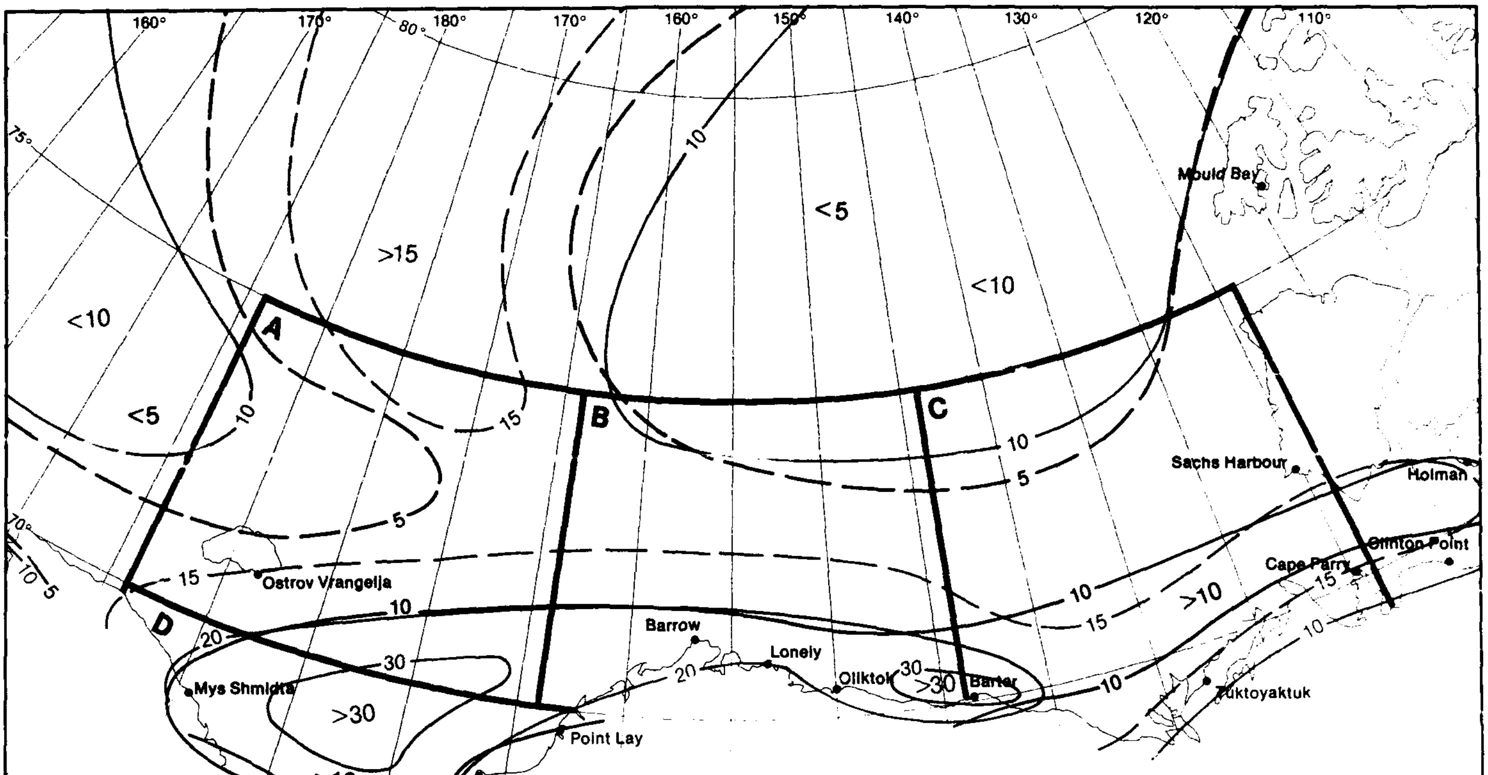
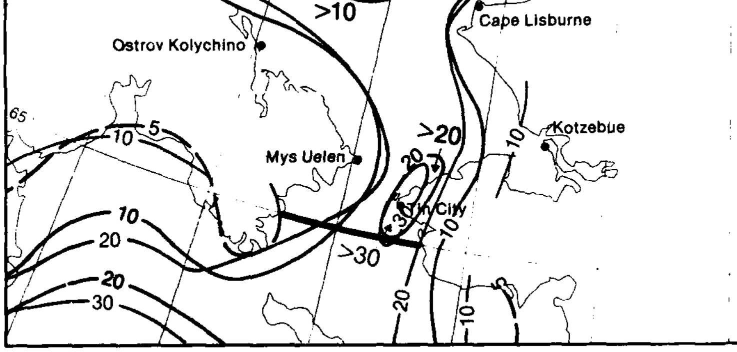

Barter
18070
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
22 | 21 | 19 | 19 | 12 | 18 | 21 | 20 | 22
N NE E SE S SW W NW C

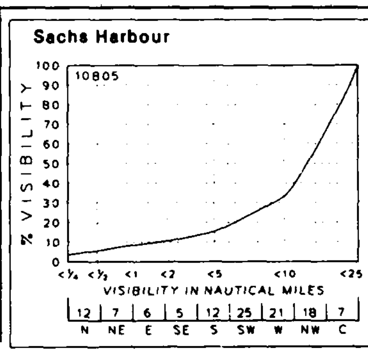

Tuktoyaktuk
3305
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
16 | 13 | 7 | 3 | 2 | 2 | 15 | 16 | 23
N NE E SE S SW W NW C

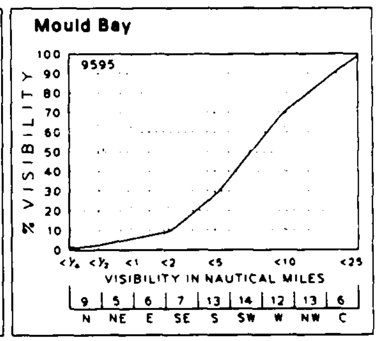

Cape Parry
19348
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
12 | 15 | 16 | 13 | 4 | 8 | 12 | 13 | 11
N NE E SE S SW W NW C

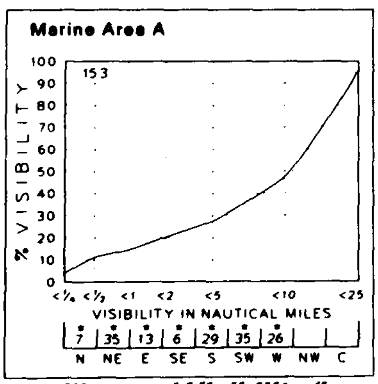

Clinton Point
4420
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
19 | 17 | 15 | 9 | 4 | 3 | 6 | 19 | 15
N NE E SE S SW W NW C

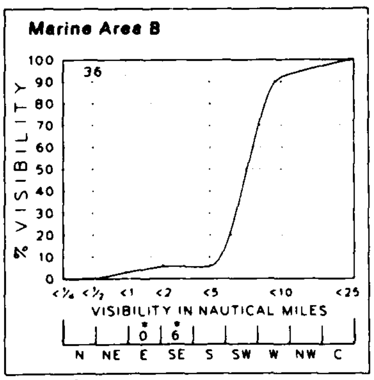

Holman
3207
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
20 | 17 | 21 | 21 | 15 | 4 | 5 | 12 | 12
N NE E SE S SW W NW C

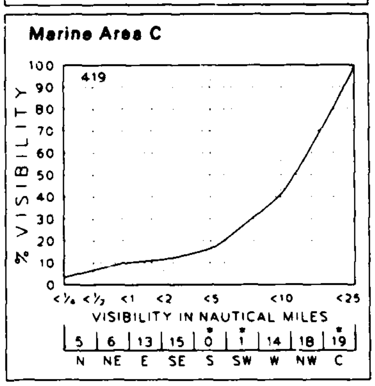



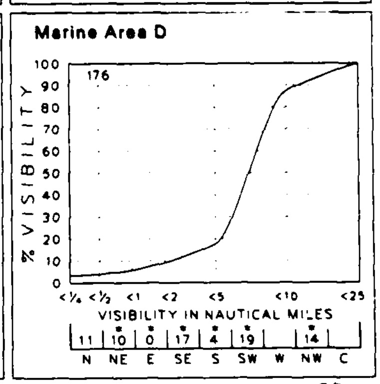








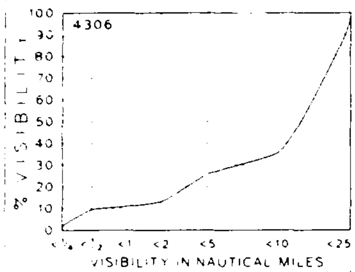




3 Ceiling and Visibility (low range)

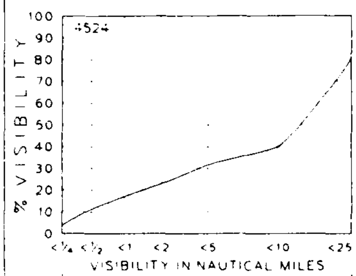
May

Ostrov Vrangelja



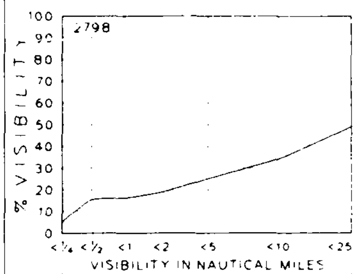
N	NE	E	SE	S	SW	W	NW	C
5	8	15	15	13	14	9	7	21

Mys Shmidta



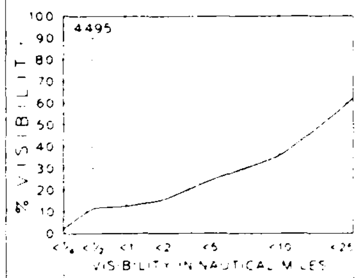
N	NE	E	SE	S	SW	W	NW	C
28	22	25	21	16	6	21	23	19

Ostrov Kolychino



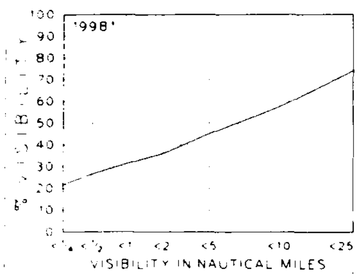
N	NE	E	SE	S	SW	W	NW	C
30	34	24	6	3	8	15	27	22

Mys Uelen



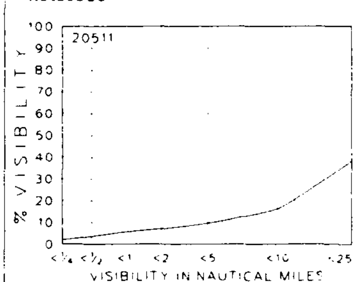
N	NE	E	SE	S	SW	W	NW	C
23	16	11	4	10	12	11	17	20

Tin City



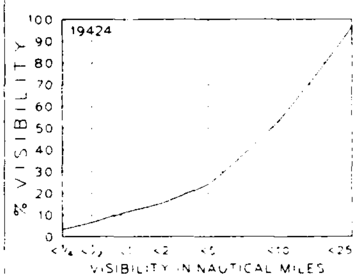
N	NE	E	SE	S	SW	W	NW	C
26	20	8	40	57	51	34	21	23

Kotzebue



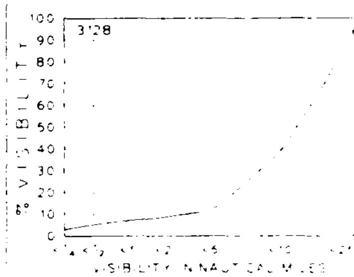
N	NE	E	SE	S	SW	W	NW	C
1	1	1	2	3	6	12	8	5

Cape Lisburne



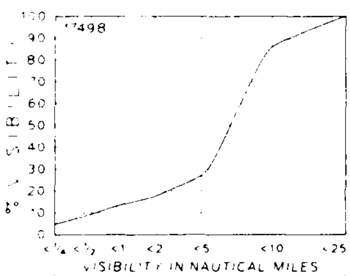
N	NE	E	SE	S	SW	W	NW	C
13	16	22	19		3	10	15	18

Point Lay



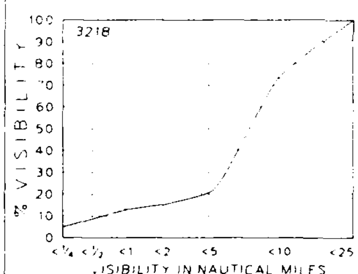
N	NE	E	SE	S	SW	W	NW	C
10	5	3	3	5	13	14	14	12

Barrow



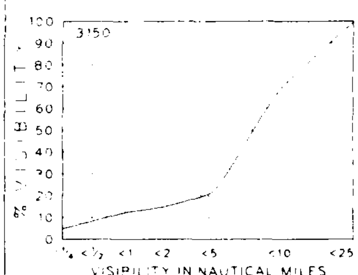
N	NE	E	SE	S	SW	W	NW	C
22	17	15	17	9	16	22	24	21

Lonely



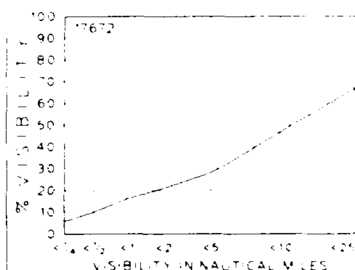
N	NE	E	SE	S	SW	W	NW	C
18	15	15	15	8	8	15	21	12

Oliktok



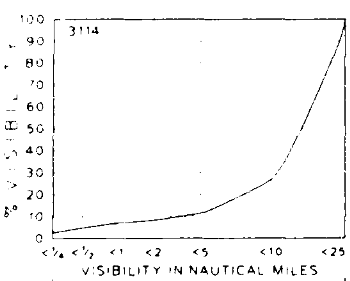
N	NE	E	SE	S	SW	W	NW	C
15	13	15	16	9	9	11	18	17

Barter



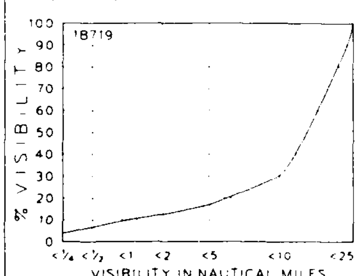
N	NE	E	SE	S	SW	W	NW	C
28	23	21	18	9	10	19	23	19

Tuktoyaktuk



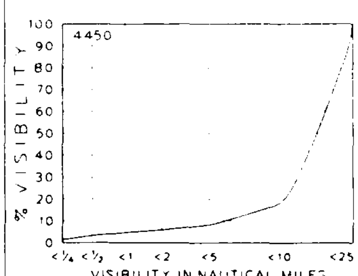
N	NE	E	SE	S	SW	W	NW	C
15	9	6	2	1	1	9	13	13

Cape Parry



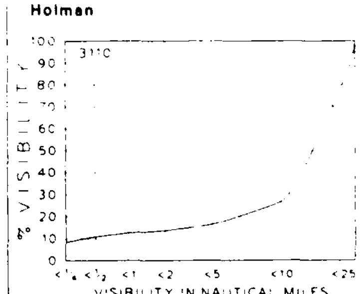
N	NE	E	SE	S	SW	W	NW	C
16	14	11	8	2	7	16	21	11

Clinton Point

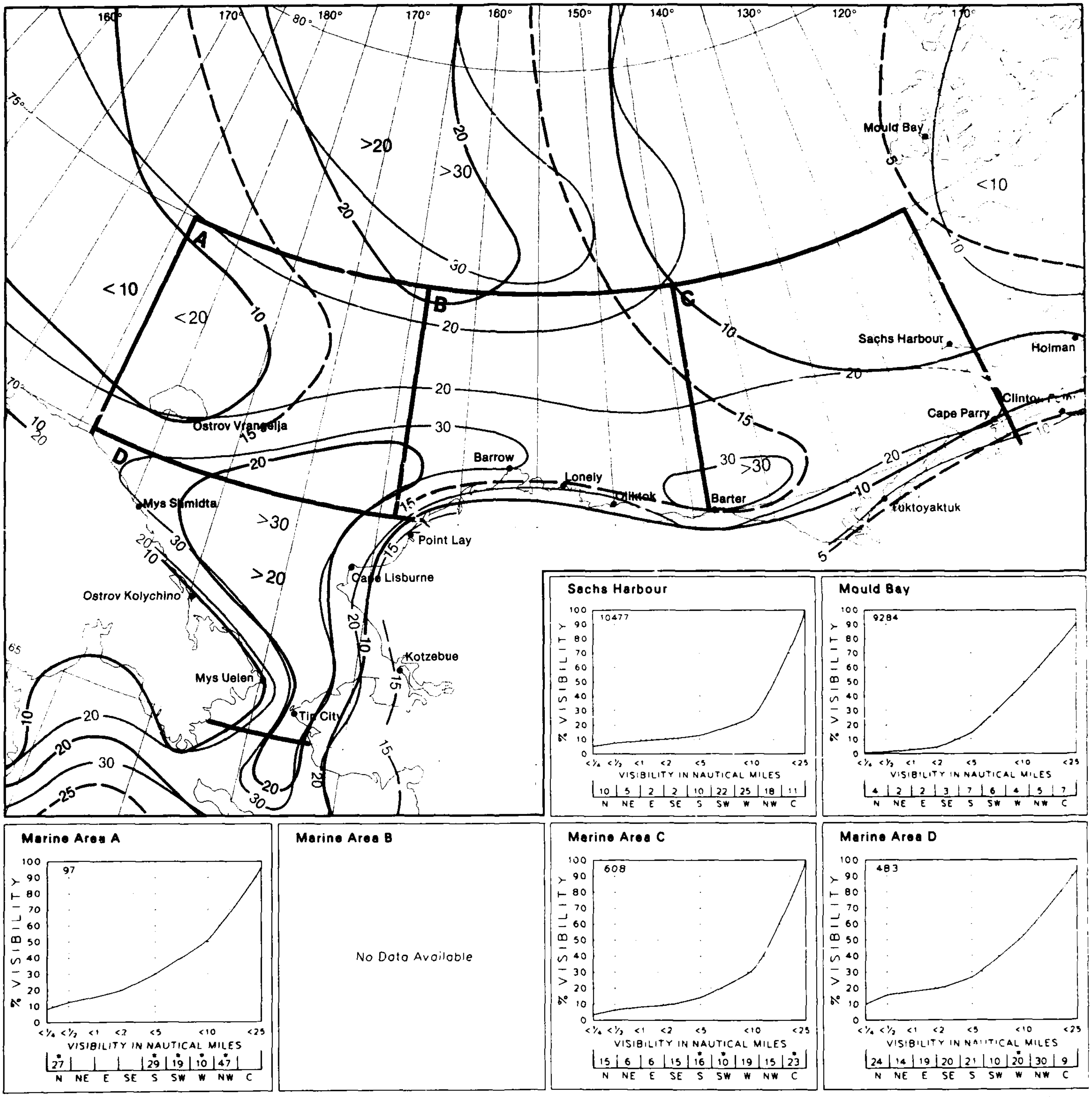


N	NE	E	SE	S	SW	W	NW	C
8	10	5	2	1	2	5	11	2

Holman

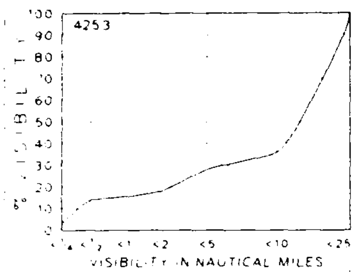


N	NE	E	SE	S	SW	W	NW	C
14	14	17	17	18	3	2	9	11



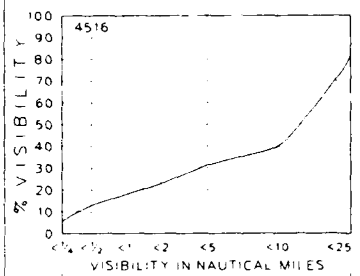
3 Ceiling and Visibility (low range) **June**

Ostrov Vrangelja



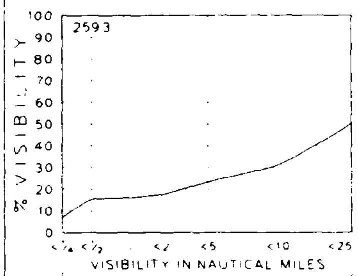
N	NE	E	SE	S	SW	W	NW	C
2	15	21	22	17	22	13	2	23

Mys Shmidta



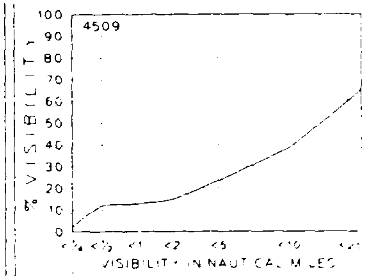
N	NE	E	SE	S	SW	W	NW	C
22	25	27	20	8	9	15	24	22

Ostrov Kolychino



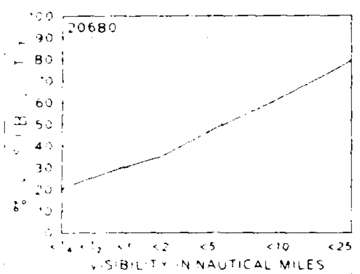
N	NE	E	SE	S	SW	W	NW	C
35	33	16	4	3	10	16	27	23

Mys Uelen



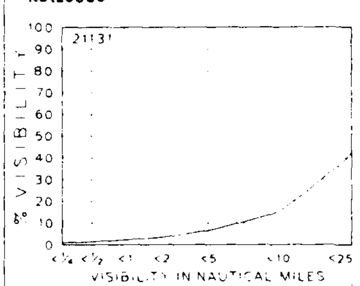
N	NE	E	SE	S	SW	W	NW	C
23	22	13	5	6	8	16	31	19

Tin City



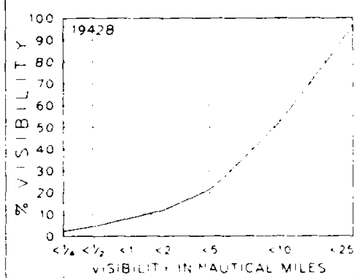
N	NE	E	SE	S	SW	W	NW	C
21	15	15	44	52	45	30	16	21

Kotzebue



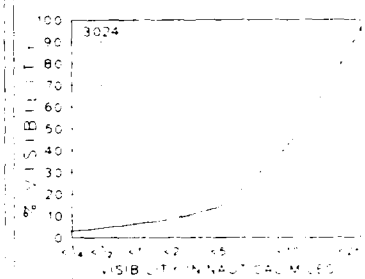
N	NE	E	SE	S	SW	W	NW	C
1	+	1	1	1	3	[illegible]	4	1

Cape Lisburne



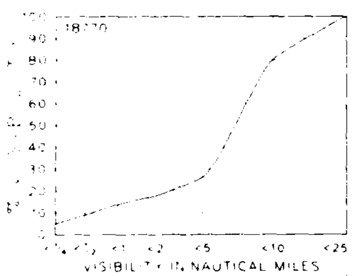
N	NE	E	SE	S	SW	W	NW	C
12	17	20	15	2	3	8	16	14

Point Lay



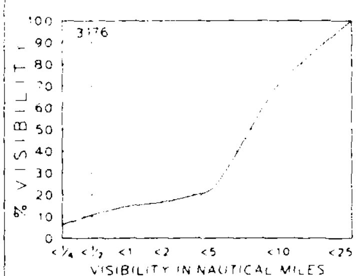
N	NE	E	SE	S	SW	W	NW	C
8	6	4	2	4	[illegible]	16	13	[illegible]

Barrow



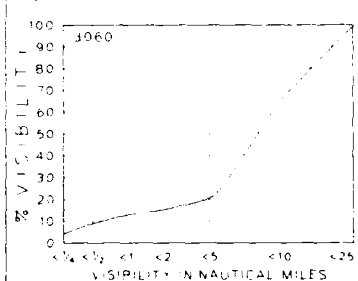
N	NE	E	SE	S	SW	W	NW	C
24	18	14	11	5	15	23	28	18

Lonely



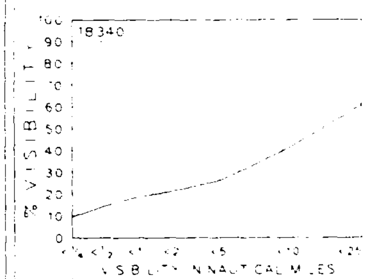
N	NE	E	SE	S	SW	W	NW	C
24	20	19	10	+	2	10	20	19

Oliktok



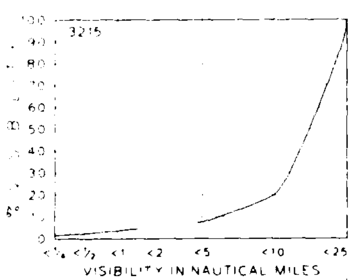
N	NE	E	SE	S	SW	W	NW	C
18	19	17	13	4	3	8	15	14

Barter



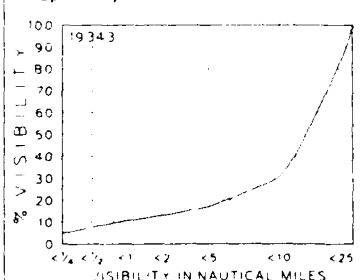
N	NE	E	SE	S	SW	W	NW	C
20	26	26	22	4	5	13	18	16

Tuktoyaktuk



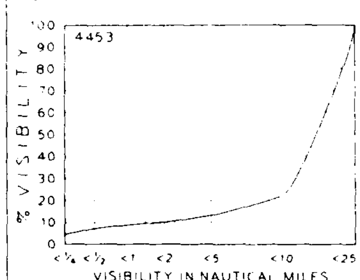
N	NE	E	SE	S	SW	W	NW	C
9	9	4	2	1	1	3	8	10

Cape Parry



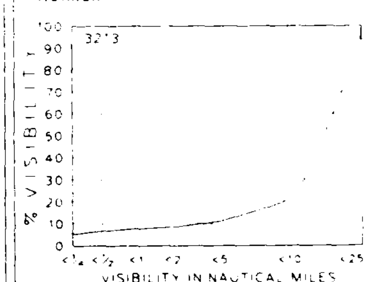
N	NE	E	SE	S	SW	W	NW	C
19	12	6	3	3	9	19	26	11

Clinton Point

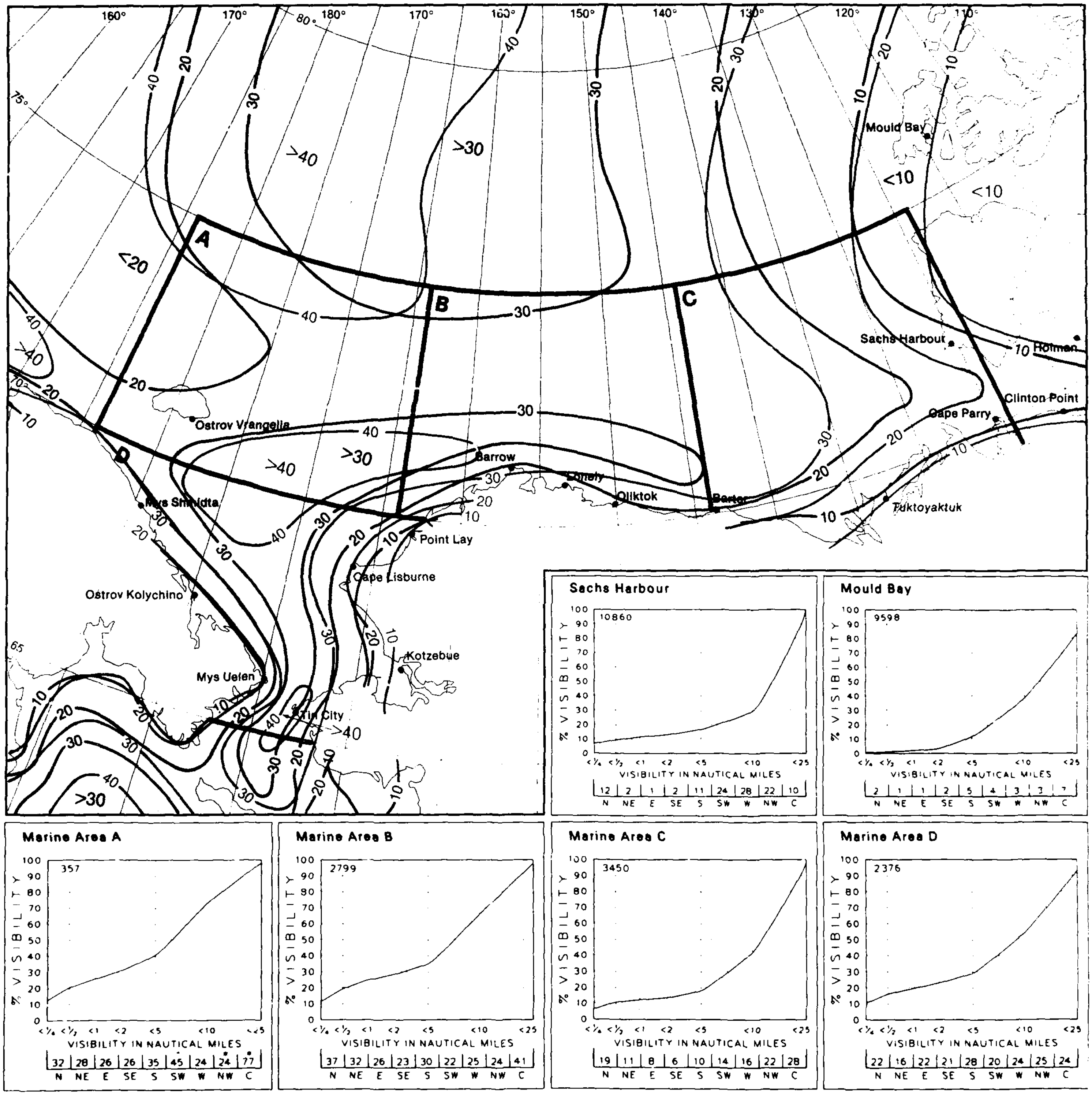


N	NE	E	SE	S	SW	W	NW	C
11	8	8	5	2	3	11	16	7

Holman



N	NE	E	SE	S	SW	W	NW	C
11	8	10	8	5	3	3	10	9



Sachs Harbour

N	NE	E	SE	S	SW	W	NW	C
12	2	1	2	11	24	28	22	10

Mould Bay

N	NE	E	SE	S	SW	W	NW	C
2	1	1	2	5	4	3	3	7

Marine Area A

N	NE	E	SE	S	SW	W	NW	C
32	28	26	26	35	45	24	24	77

Marine Area B

N	NE	E	SE	S	SW	W	NW	C
37	32	26	23	30	22	25	24	41

Marine Area C

N	NE	E	SE	S	SW	W	NW	C
19	11	8	6	10	14	16	22	28

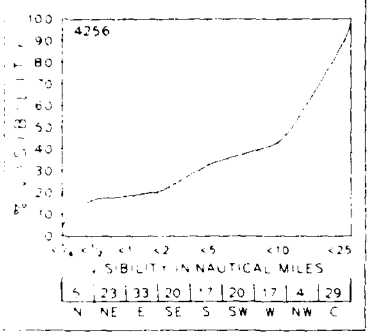
Marine Area D

N	NE	E	SE	S	SW	W	NW	C
22	16	22	21	28	20	24	25	24

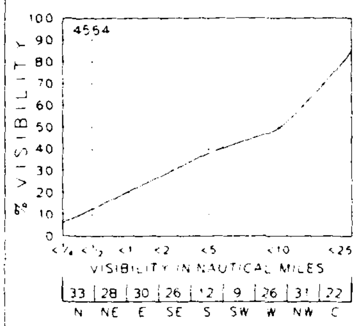
3 Ceiling and Visibility (low range)

July

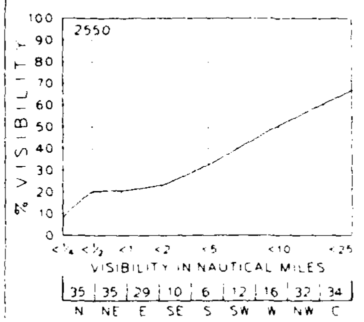
Ostrov Vrangelja



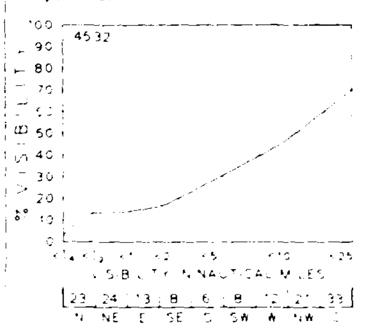
Mys Shmidta



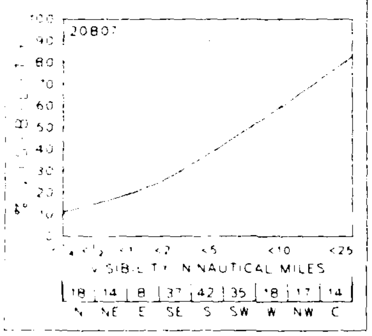
Ostrov Kolychino



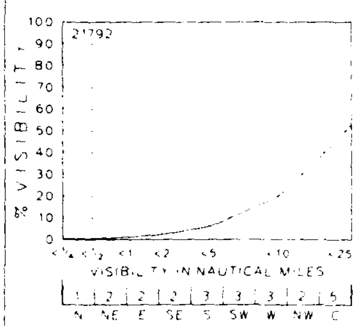
Mys Uelen



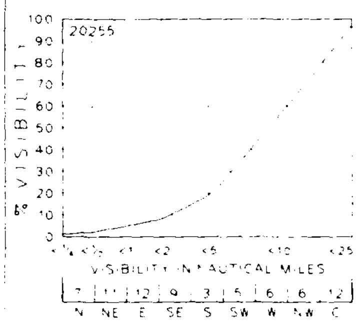
Tin City



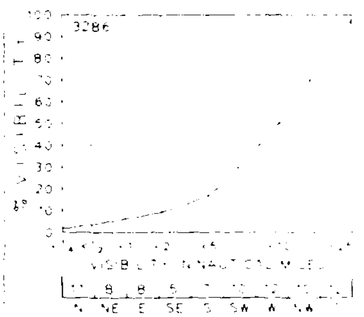
Kotzebue



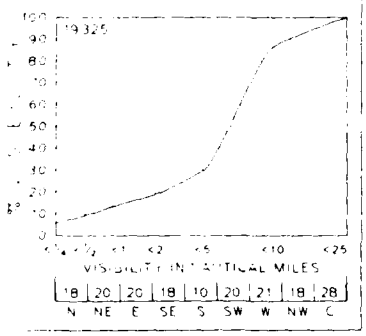
Cape Lisburne



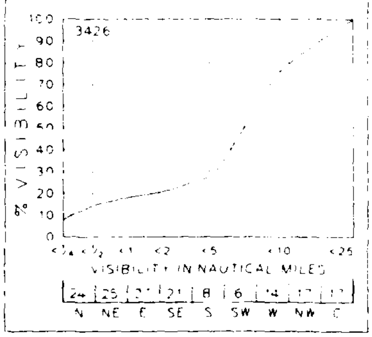
Point Lay



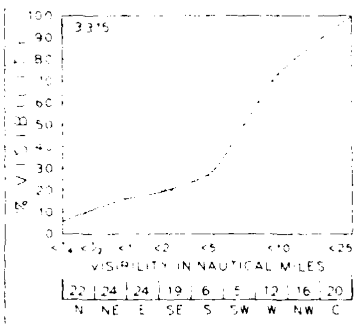
Barrow



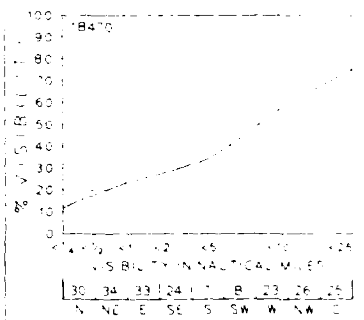
Lonely



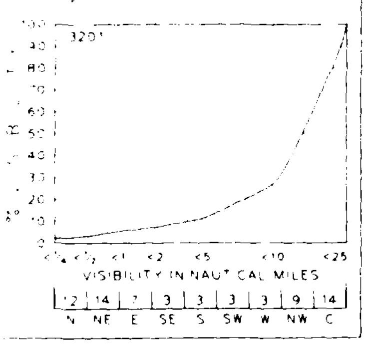
Oliktok



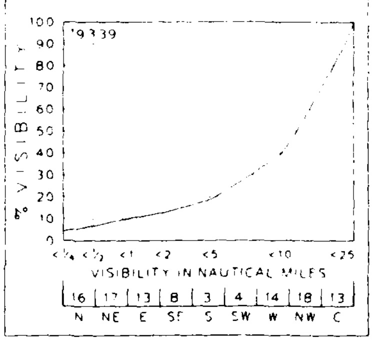
Barter



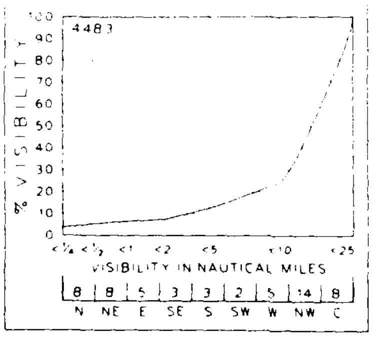
Tuktoyaktuk



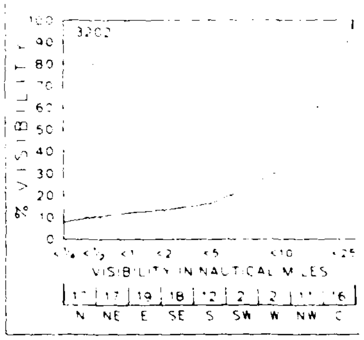
Cape Parry

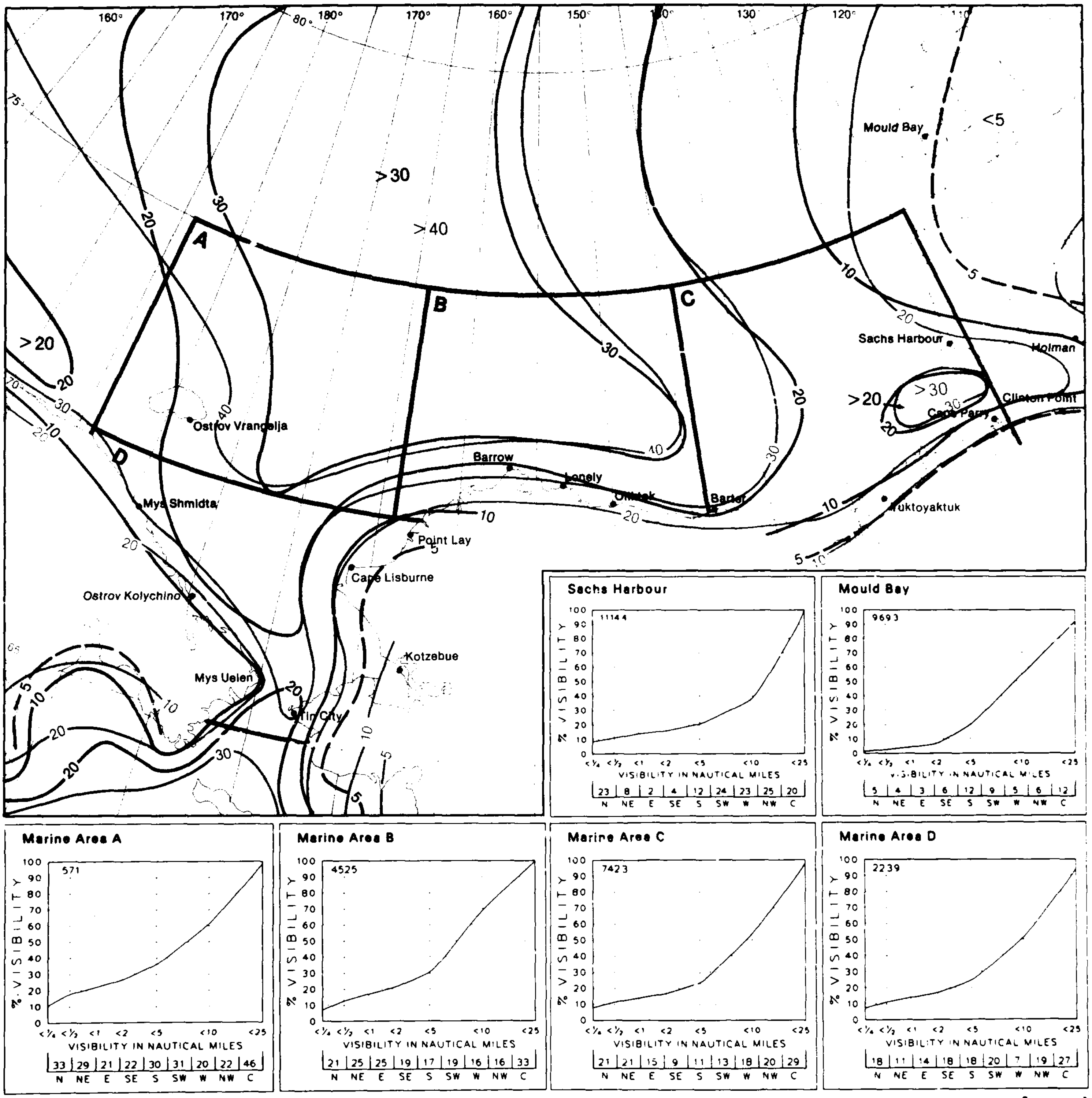


Clinton Point



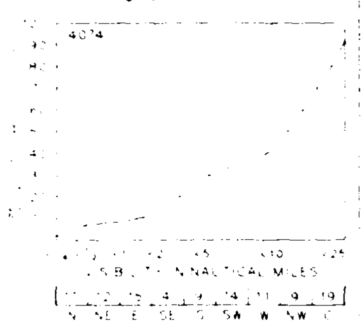
Holman



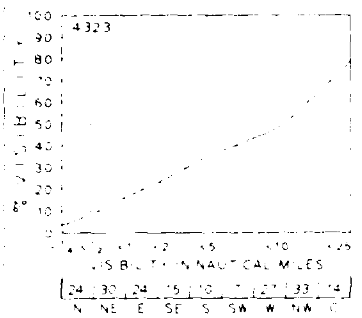


3 Ceiling and Visibility (low range) **August**

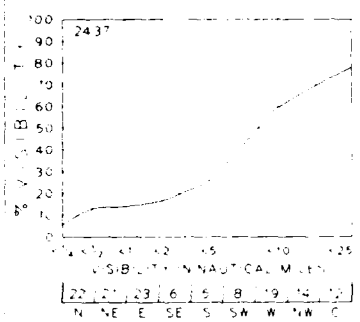
Ostrov Vrangelja



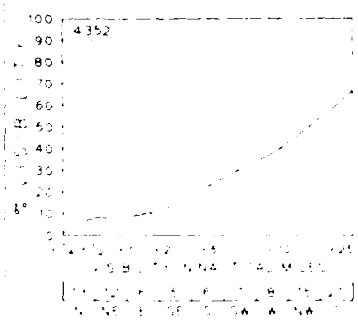
Mys Shmidta



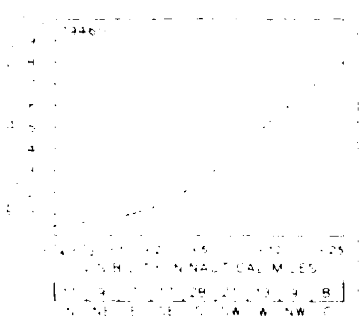
Ostrov Kolychino



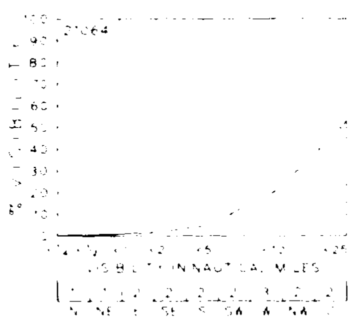
Mys Uelen



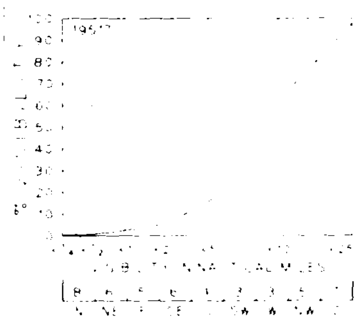
Tin City



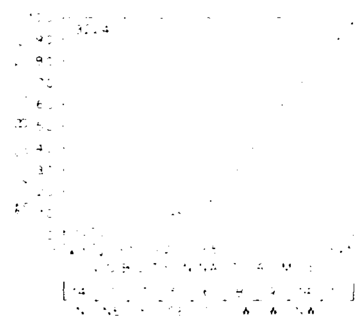
Kotzebue



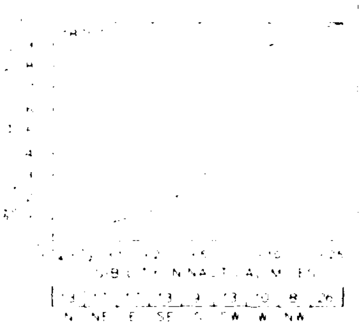
Cape Lisburne



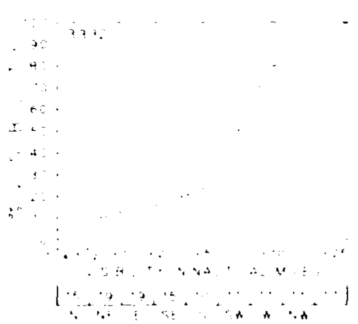
Point Lay



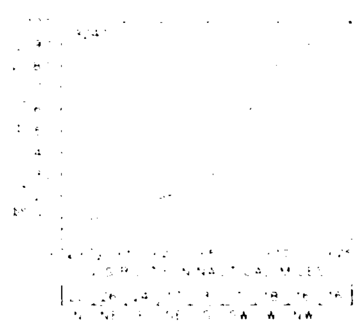
Barrow



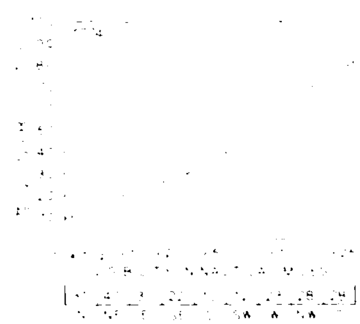
Lonely



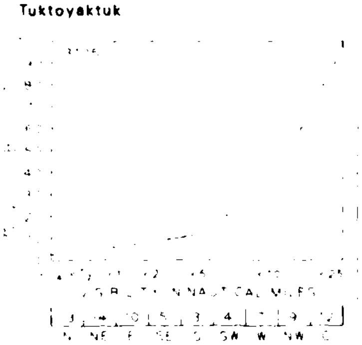
Oliktok



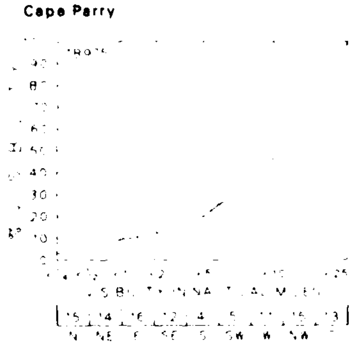
Barter



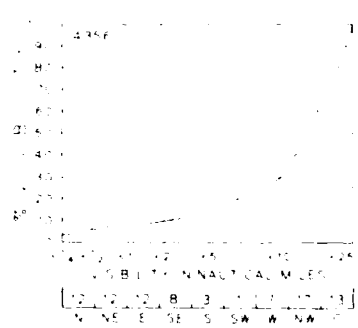
Tuktoyaktuk



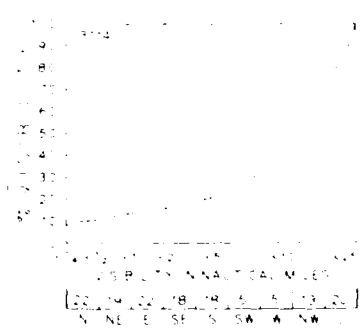
Cape Parry

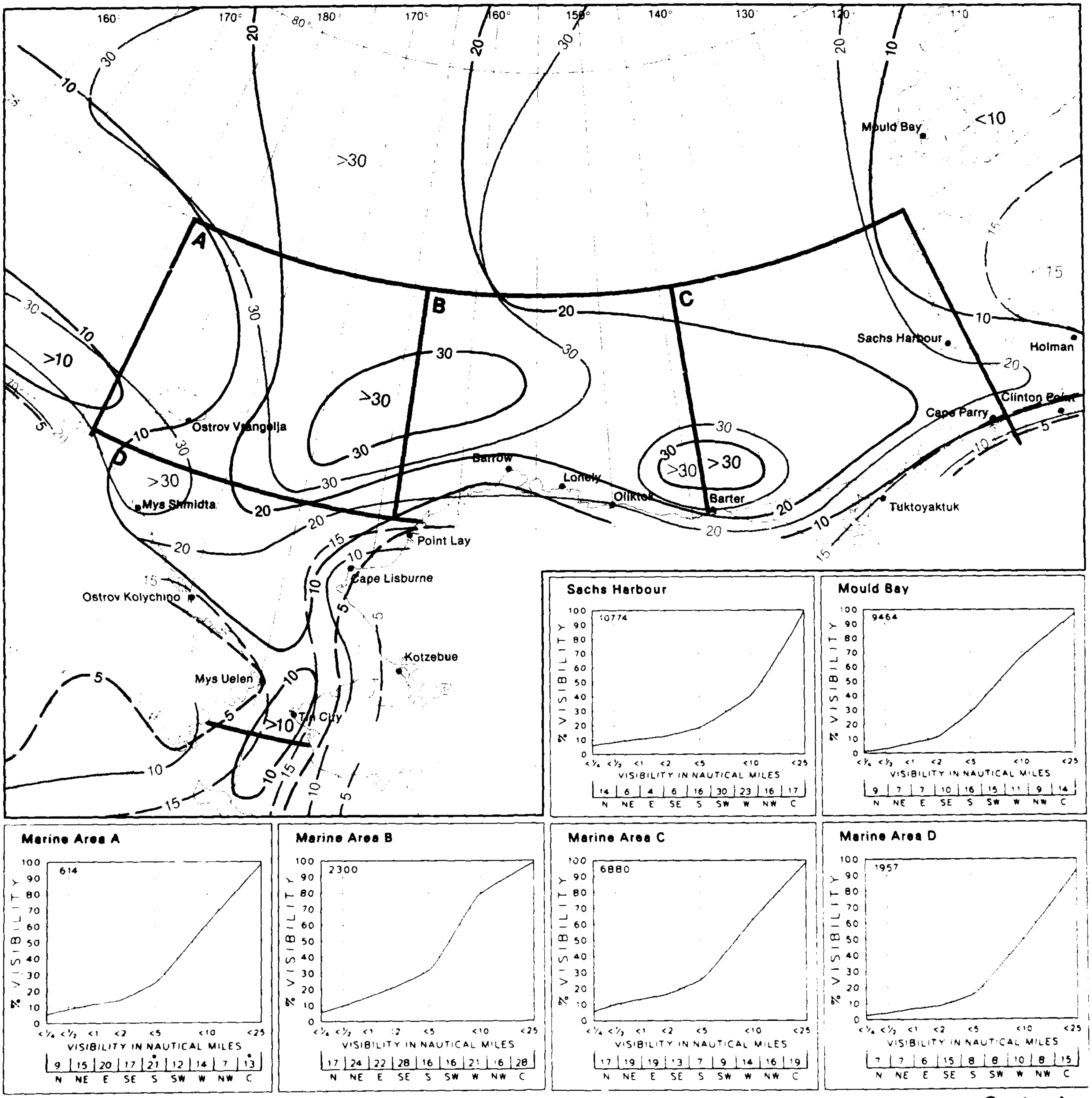


Clinton Point



Holman

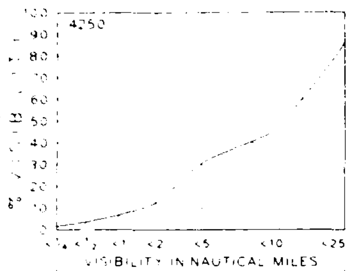




3 Ceiling and Visibility (low range)

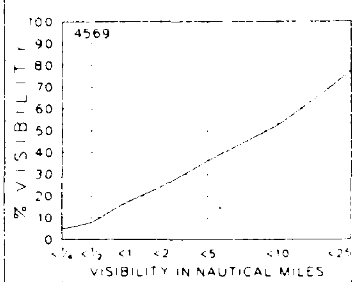
September

Ostrov Vrangelja



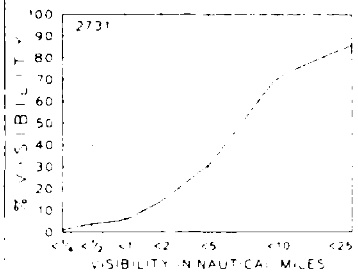
N	NE	E	SE	S	SW	W	NW	C
16	12	12	13	5	12	9	11	5

Mys Shmidta



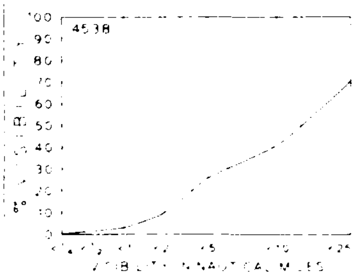
N	NE	E	SE	S	SW	W	NW	C
35	25	15	8	3	2	26	40	6

Ostrov Kolychino



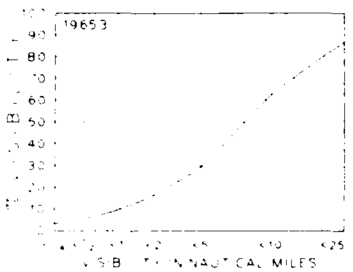
N	NE	E	SE	S	SW	W	NW	C
22	16	11	8	5	4	7	16	17

Mys Uelen



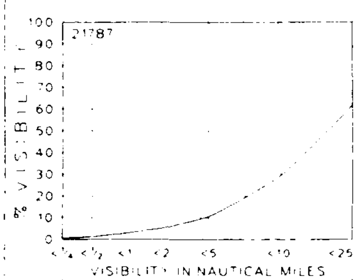
N	NE	E	SE	S	SW	W	NW	C
10	6	10	8	[illegible]	3	6	13	10

Tin City



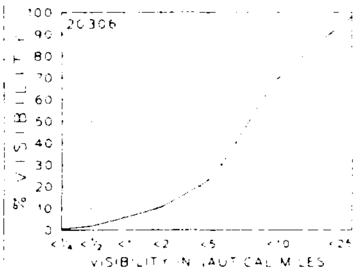
N	NE	E	SE	S	SW	W	NW	C
19	12	5	21	21	14	16	26	4

Kotzebue



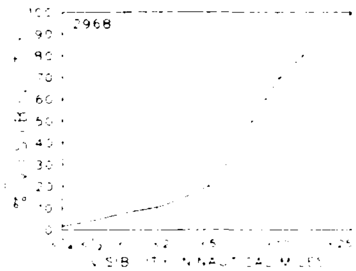
N	NE	E	SE	S	SW	W	NW	C
1	2	6	9	8	5	10	4	5

Cape Lisburne



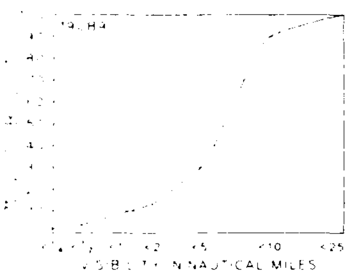
N	NE	E	SE	S	SW	W	NW	C
9	17	11	7	11	9	8	10	7

Point Lay



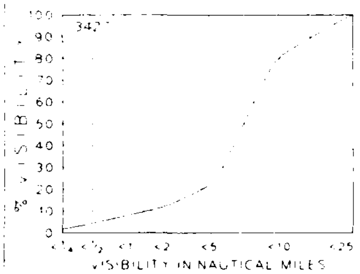
N	NE	E	SE	S	SW	W	NW	C
11	13	12	10	5	13	9	13	8

Barrow



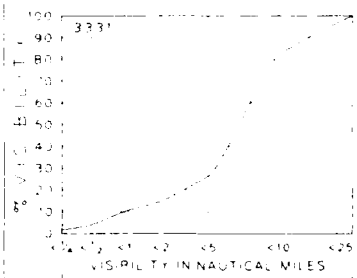
N	NE	E	SE	S	SW	W	NW	C
14	17	15	10	10	12	16	11	14

Lonely



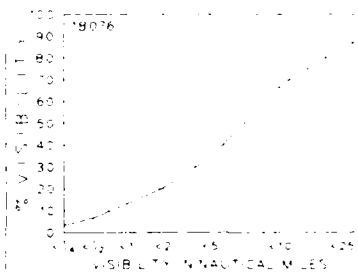
N	NE	E	SE	S	SW	W	NW	C
11	14	11	11	6	11	16	10	11

Oliktok



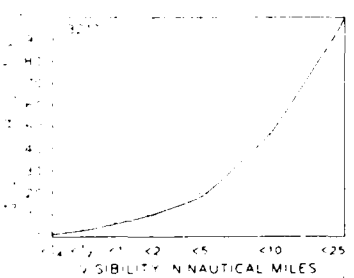
N	NE	E	SE	S	SW	W	NW	C
14	21	18	10	6	10	14	14	15

Barter



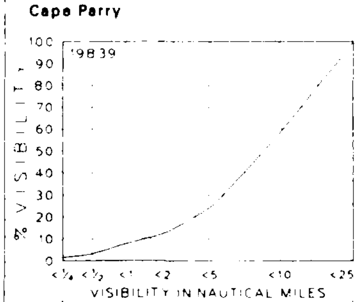
N	NE	E	SE	S	SW	W	NW	C
22	25	23	13	8	8	27	27	28

Tuktoyaktuk



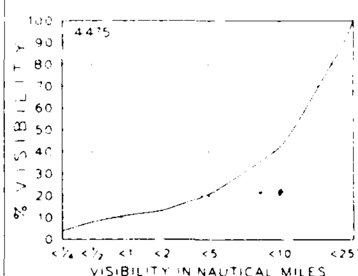
N	NE	E	SE	S	SW	W	NW	C
16	13	11	9	6	6	8	12	10

Cape Parry



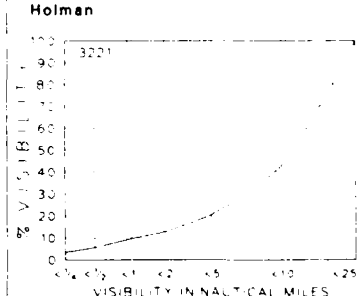
N	NE	E	SE	S	SW	W	NW	C
13	12	17	13	4	6	13	15	8

Clinton Point

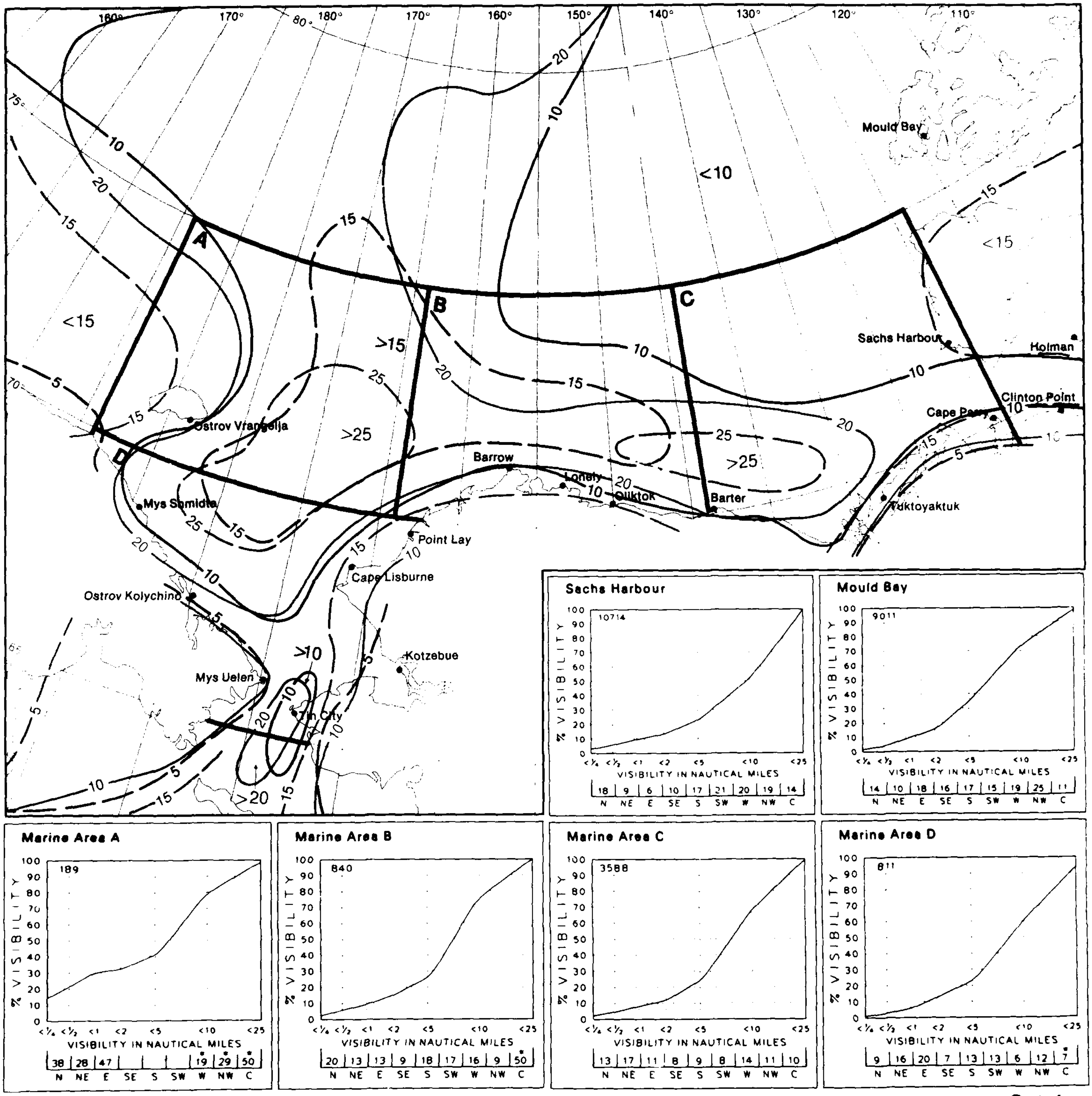


N	NE	E	SE	S	SW	W	NW	C
23	14	21	16	3	4	6	25	10

Holman



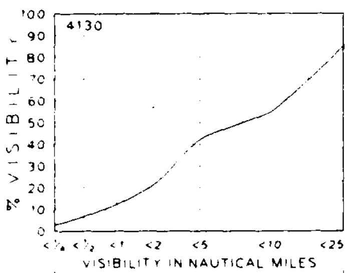
N	NE	E	SE	S	SW	W	NW	C
19	13	24	20	11	4	7	15	10



3 Ceiling and Visibility (low range)

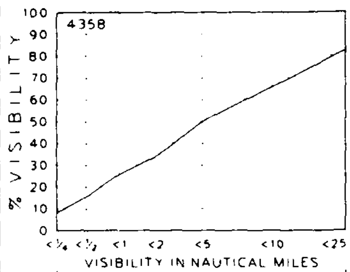
October

Ostrov Vrangelja



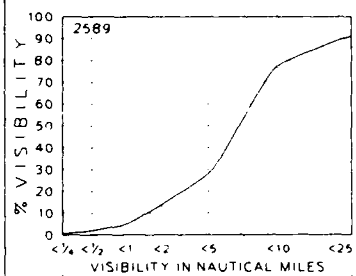
N	NE	E	SE	S	SW	W	NW	C
29	22	18	14	5	18	16	17	5

Mys Shmidta



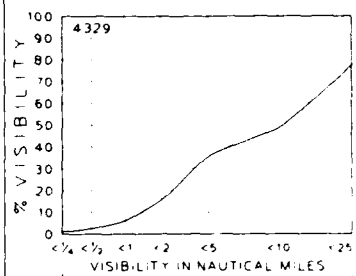
N	NE	E	SE	S	SW	W	NW	C
39	27	30	21	5	2	43	49	5

Ostrov Kolychino



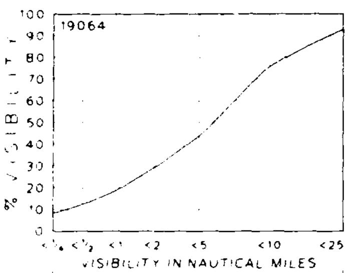
N	NE	E	SE	S	SW	W	NW	C
20	15	15	7	8	5	6	16	6

Mys Uelen



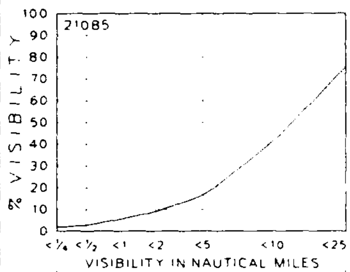
N	NE	E	SE	S	SW	W	NW	C
19	11	17	30	15	4	9	23	5

Tin City



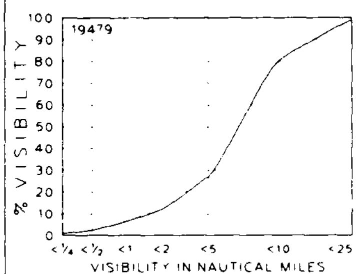
N	NE	E	SE	S	SW	W	NW	C
33	23	13	40	35	11	11	45	6

Kotzebue



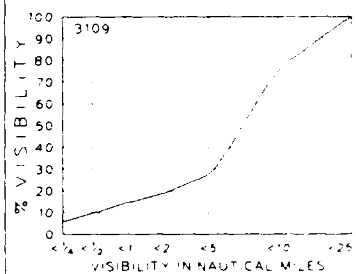
N	NE	E	SE	S	SW	W	NW	C
4	3	9	15	12	13	15	9	4

Cape Lisburne



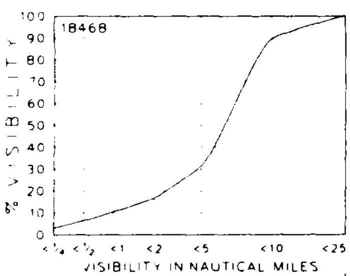
N	NE	E	SE	S	SW	W	NW	C
12	13	9	5	1	21	24	18	6

Point Lay



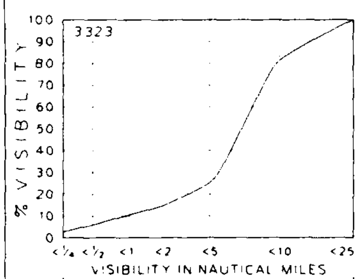
N	NE	E	SE	S	SW	W	NW	C
14	23	23	11	11	20	18	12	8

Barrow



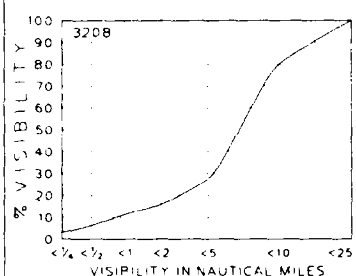
N	NE	E	SE	S	SW	W	NW	C
7	18	23	16	10	13	16	9	12

Lonely



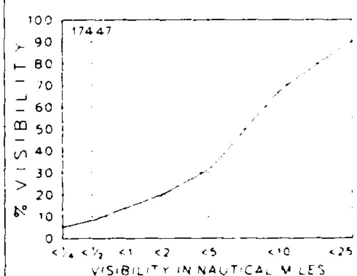
N	NE	E	SE	S	SW	W	NW	C
10	17	20	13	6	14	12	14	7

Oliktok



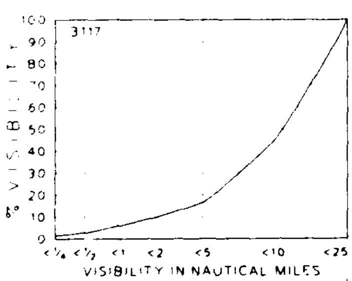
N	NE	E	SE	S	SW	W	NW	C
16	17	20	16	12	11	17	19	8

Barter



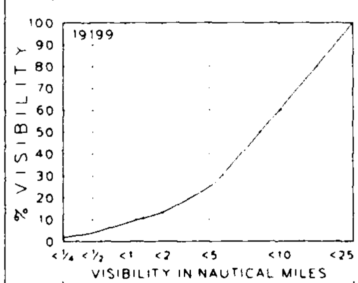
N	NE	E	SE	S	SW	W	NW	C
16	14	21	16	5	8	26	31	19

Tuktoyaktuk



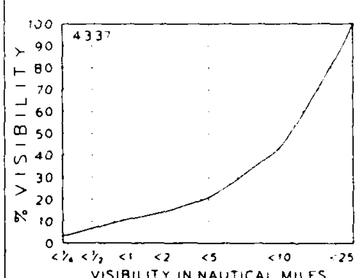
N	NE	E	SE	S	SW	W	NW	C
17	16	10	7	3	6	8	17	10

Cape Parry



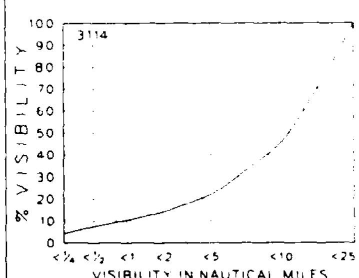
N	NE	E	SE	S	SW	W	NW	C
11	10	22	18	5	5	10	15	5

Clinton Point

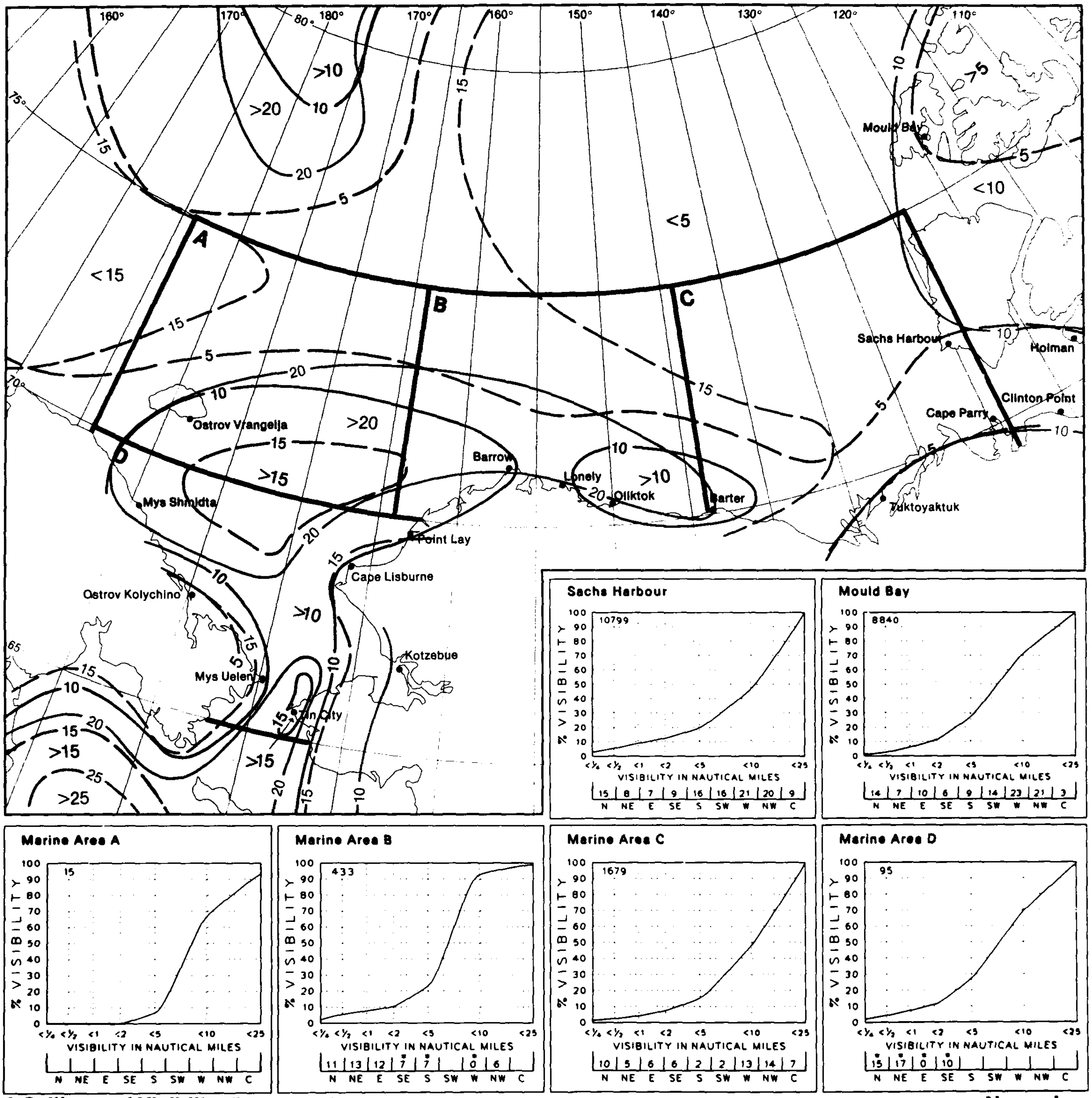


N	NE	E	SE	S	SW	W	NW	C
24	25	41	15	6	4	5	19	6

Holman

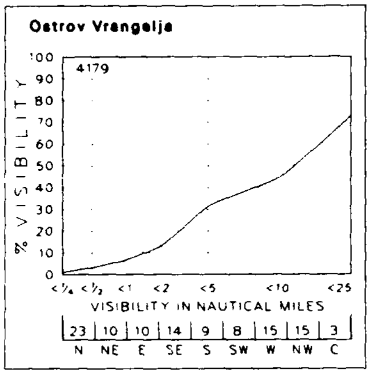


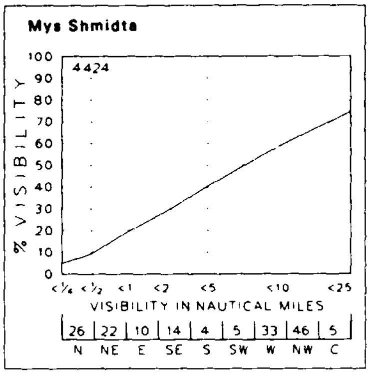
N	NE	E	SE	S	SW	W	NW	C
18	24	20	14	7	5	17	19	5

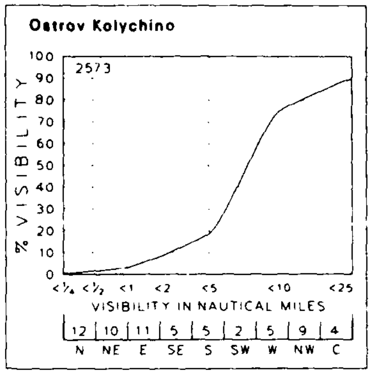


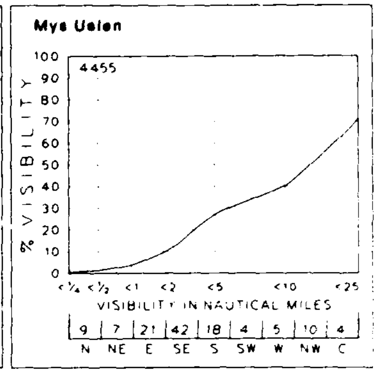
3 Ceiling and Visibility (low range)

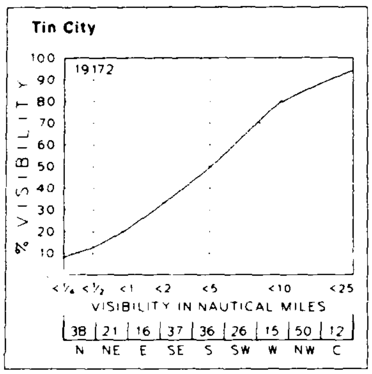
November

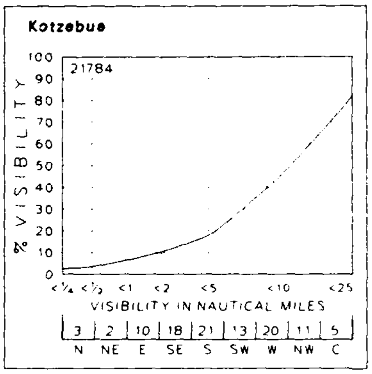

Ostrov Vrangelja
4179
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
23 10 10 14 9 8 15 15 3
N NE E SE S SW W NW C

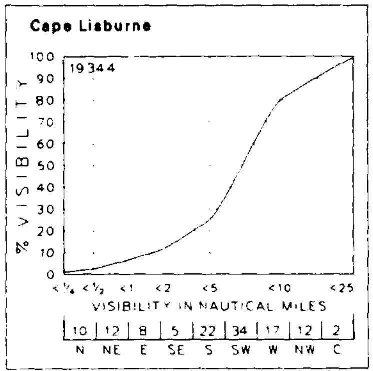

Mys Shmidta
4424
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
26 22 10 14 4 5 33 46 5
N NE E SE S SW W NW C

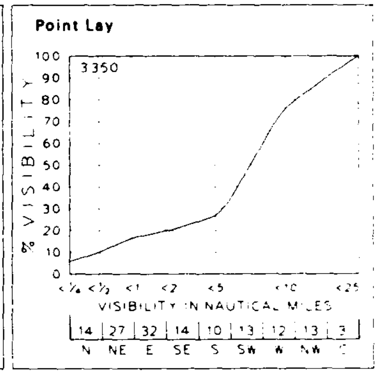

Ostrov Kolychino
2573
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
12 10 11 5 5 2 5 9 4
N NE E SE S SW W NW C

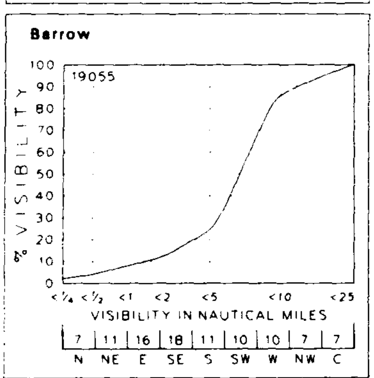

Mys Uelen
4455
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
9 7 21 42 18 4 5 10 4
N NE E SE S SW W NW C

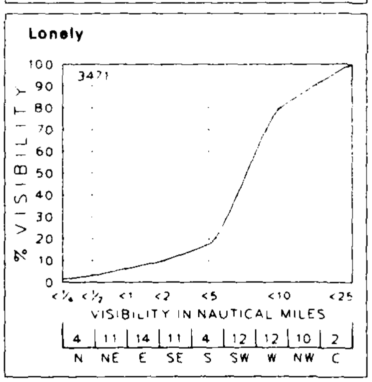

Tin City
19172
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
38 21 16 37 36 26 15 50 12
N NE E SE S SW W NW C

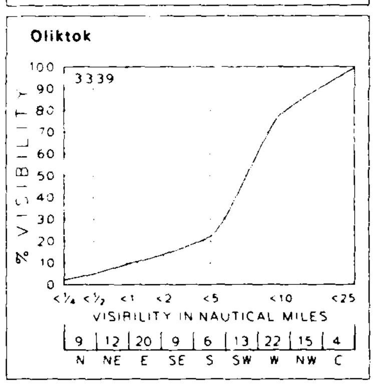

Kotzebue
21784
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
3 2 10 18 21 13 20 11 5
N NE E SE S SW W NW C

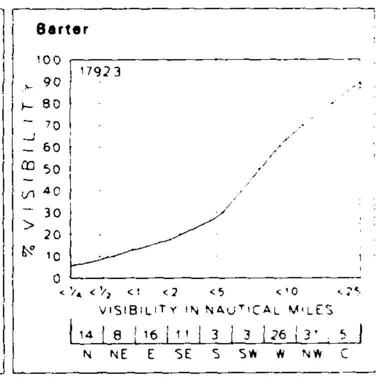

Cape Lisburne
19344
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
10 12 8 5 22 34 17 12 2
N NE E SE S SW W NW C

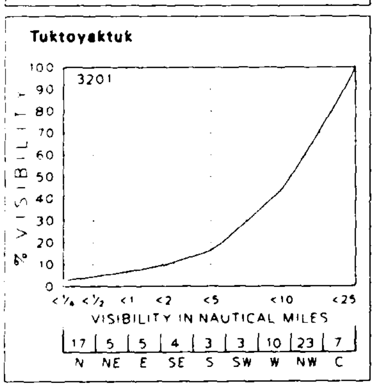

Point Lay
3350
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
14 27 32 14 10 13 12 13 3
N NE E SE S SW W NW C

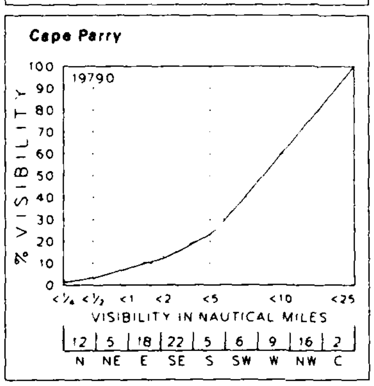

Barrow
19055
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
7 11 16 18 11 10 10 7 7
N NE E SE S SW W NW C

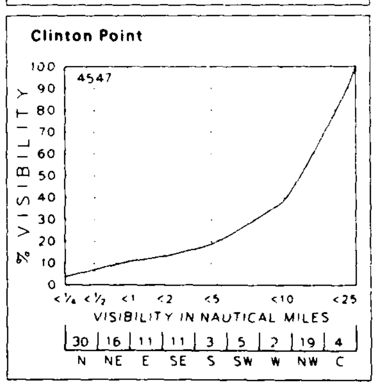

Lonely
3471
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
4 11 14 11 4 12 12 10 2
N NE E SE S SW W NW C

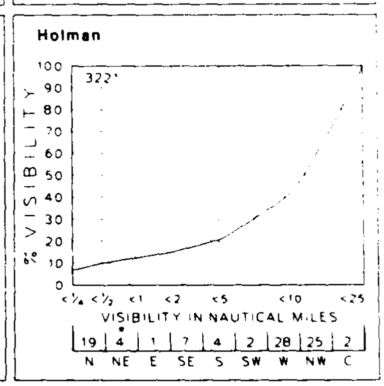

Oliktok
3339
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
9 12 20 9 6 13 22 15 4
N NE E SE S SW W NW C

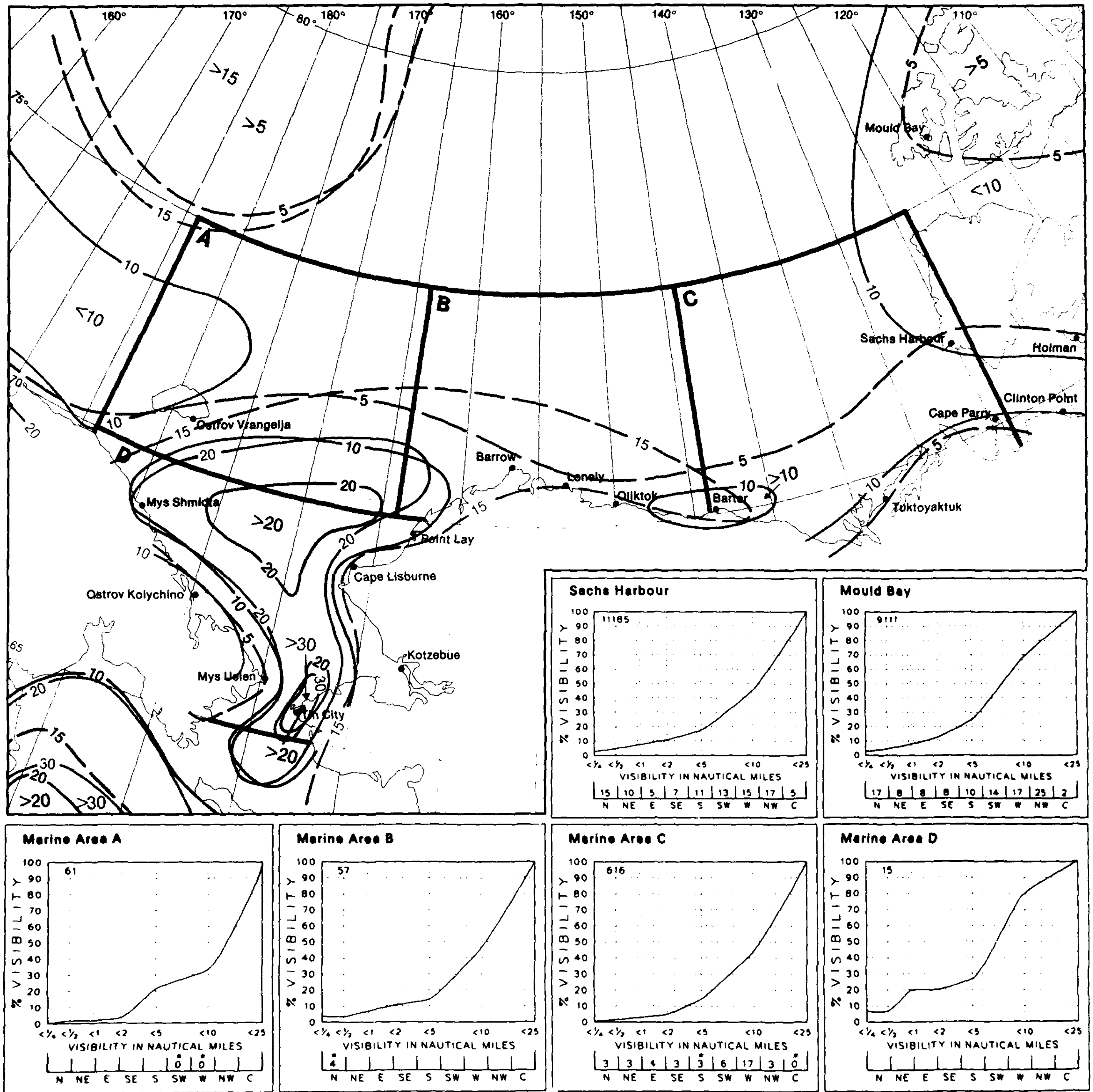

Barter
17923
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
14 8 16 11 3 3 26 5
N NE E SE S SW W NW C


Tuktoyaktuk
3201
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
17 5 5 4 3 3 10 23 7
N NE E SE S SW W NW C


Cape Parry
19790
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
12 5 18 22 5 6 9 16 2
N NE E SE S SW W NW C


Clinton Point
4547
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
30 16 11 11 3 5 2 19 4
N NE E SE S SW W NW C


Holman
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
19 4 1 7 4 2 28 25 2
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

December

Map 4. Ceiling/visibility (mid range)

BLACK LINE – Percent frequency of low cloud ceiling (LCC) <1000 feet and/or visibility <5 nautical miles.

BLUE LINE – Percent frequency of LCC <8000 feet and/or visibility <10 nautical miles.

Albers Equal–Area Conic Projection

Graphs: Low cloud ceiling/visibility

Percent frequency of simultaneous occurrence of specified low cloud ceiling (hundreds of feet) and visibility (nautical miles).

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM)					1659
	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	+	0	+	2	7	11
50<80	0	0	+	+	1	1
35<50	+	+	+	1	2	3
20<35	1	1	2	3	8	11
10<20	1	3	3	4	8	8
6<10	+	+	1	2	1	1
3<6	+	+	+	1	+	+
1.5<3	0	0	+	0	0	+
0<1.5	5	2	2	1	2	+

Number of observations.

Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.

Obscurations are included under ceiling "0<1.5".

"NC" (no ceiling) includes bases of clouds ≥8000 feet or N_h <5/8.

(8% of all observations reported ceiling ≥1000 feet but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles).

\+ indicates <.5% but >0.

Cloud classification is based upon the cloud appearance and, when possible, the formation process. In estimating the height of the lowest cloud base (h), the observer first determines the type of cloud; and, based on the normal height range for that cloud type, determines the height. Heights are generally higher in the tropics and lower at high latitudes. Similarly, clouds will generally be higher in summer and lower in winter. The appearance of the cloud, such as motion visible in the cloud base and the size of the cloud elements, gives some indication as to how much it is higher or lower than the average. After the observer estimates the height of the base of the lowest cloud in sight, he selects and records the appropriate code (see height table and LCC column in graph). Refer to the texts in Sets 3 and 6 for additional information on clouds.

HEIGHT (h) ABOVE THE SEA OF THE BASE OF THE LOWEST CLOUD SEEN (WMO Code, 1982)

If sky is clear or has only Cirrus-type clouds, code h as 9.

Code figs.	Height in meters	Height in feet
0	0 to 49	100 or less
1	50 to 99	200 or 300
2	100 to 199	400 to 600
3	200 to 299	700 to 900
4	300 to 599	1000 to 1900
5	600 to 999	2000 to 3200
6	1000 to 1499	3300 to 4900
7	1500 to 1999	5000 to 6500
8	2000 to 2499	6600 to 8200
9	2500 or more, or no clouds	8300 or more, or no clouds
/	Sky obscured by fog or snow	

Ostrov Vrangelje

Low cloud ceiling (10^2 ft)	Visibility (NM) 4162: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	3	3	4	11	9	46
50<80	+	+	+	1	+	+
35<50	+	+	+	+	+	1
20<35	+	1	1	2	1	1
10<20	+	+	1	3	1	2
6<10	0	+	+	1	+	1
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	1	+	0	0	0	+

Mys Shmidta

Low cloud ceiling (10^2 ft)	Visibility (NM) 4693: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	5	6	6	10	14	34
50<80	+	+	+	1	1	+
35<50	+	+	+	1	1	+
20<35	1	1	1	2	1	1
10<20	1	2	2	2	1	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	0	0
0<1.5	2	+	+	0	0	0

Ostrov Kolychino

Low cloud ceiling (10^2 ft)	Visibility (NM) 2890: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	3	7	43	22
50<80	+	+	1	2	2	1
35<50	0	+	+	0	+	+
20<35	0	+	+	1	3	1
10<20	+	+	2	2	2	+
6<10	+	+	[illegible]	+	+	+
3<6	0	0	+	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	1	+	+	+	0	+

Mys Uelen

Low cloud ceiling (10^2 ft)	Visibility (NM) 4678: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	[illegible]	3	7	5	45
50<80	0	+	+	+	+	+
35<50	0	+	+	+	+	+
20<35	+	+	1	2	1	4
10<20	1	1	5	9	4	4
6<10	+	+	1	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	0	0
0<1.5	1	0	0	+	+	+

Tin City

Low cloud ceiling (10^2 ft)	Visibility (NM) 3889: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	5	5	4	7	14	17
50<80	+	+	+	+	1	1
35<50	+	+	+	1	1	1
20<35	1	1	1	2	2	1
10<20	1	1	1	2	2	1
6<10	+	+	1	2	2	+
3<6	+	1	+	1	1	+
1.5<3	+	0	+	0	+	0
0<1.5	13	1	1	+	0	0

Kotzebue

Low cloud ceiling (10^2 ft)	Visibility (NM) 15508: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	1	3	9	52
50<80	+	+	+	+	1	2
35<50	+	+	+	+	2	2
20<35	+	+	1	2	3	3
10<20	+	+	1	2	2	1
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	+	+
0<1.5	3	2	1	+	+	+

Cape Lisburne

Low cloud ceiling (10^2 ft)	Visibility (NM) [illegible]146: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	2	1	3	16	31
50<80	0	+	+	1	3	1
35<50	0	+	+	+	1	1
20<35	+	1	1	3	7	3
10<20	+	1	2	4	7	3
6<10	0	+	+	1	1	1
3<6	0	+	0	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	1	2	1	+	0	0

Point Lay

Low cloud ceiling (10^2 ft)	Visibility (NM) 332[illegible]: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	7	2	2	4	28	20
50<80	+	+	+	+	2	+
35<50	0	0	+	0	+	+
20<35	+	+	+	1	4	1
10<20	2	1	1	4	9	2
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	+	0	0	+	0	0
0<1.5	5	+	+	+	0	+

Barrow

Low cloud ceiling (10^2 ft)	Visibility (NM) 14644: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	2	2	3	6	42	11
50<80	+	+	+	1	4	+
35<50	+	+	+	+	1	+
20<35	+	+	+	1	4	+
10<20	1	1	1	2	5	+
6<10	+	+	+	1	2	+
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	3	1	+	+	+	0

Lonely

Low cloud ceiling (10^2 ft)	Visibility (NM) 3372: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	2	2	2	3	40	20
50<80	+	+	+	1	2	1
35<50	+	0	0	+	1	+
20<35	+	+	+	1	4	1
10<20	1	1	1	2	7	1
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	0
1.5<3	+	+	+	+	+	0
0<1.5	2	1	+	+	+	0

Oliktok

Low cloud ceiling (10^2 ft)	Visibility (NM) 3284: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	4	3	2	5	38	17
50<80	+	+	+	+	2	1
35<50	0	0	0	+	[illegible]	+
20<35	+	+	+	1	4	1
10<20	1	1	1	2	8	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	+	+	0	0	+	0
0<1.5	4	1	+	+	+	0

Barter

Low cloud ceiling (10^2 ft)	Visibility (NM) 15276: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	5	3	2	4	19	34
50<80	1	+	+	1	3	2
35<50	+	+	+	+	1	1
20<35	1	1	1	2	3	1
10<20	1	1	1	1	3	1
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	0
1.5<3	+	+	+	+	+	0
0<1.5	5	1	+	+	+	0

Tuktoyaktuk

Low cloud ceiling (10^2 ft)	Visibility (NM) 3029: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	1	2	18	48
50<80	+	+	+	+	2	2
35<50	+	+	+	+	1	1
20<35	+	+	+	1	4	3
10<20	+	1	1	1	4	1
6<10	0	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	0	0	0	+	+
0<1.5	2	1	+	+	+	0

Cape Parry

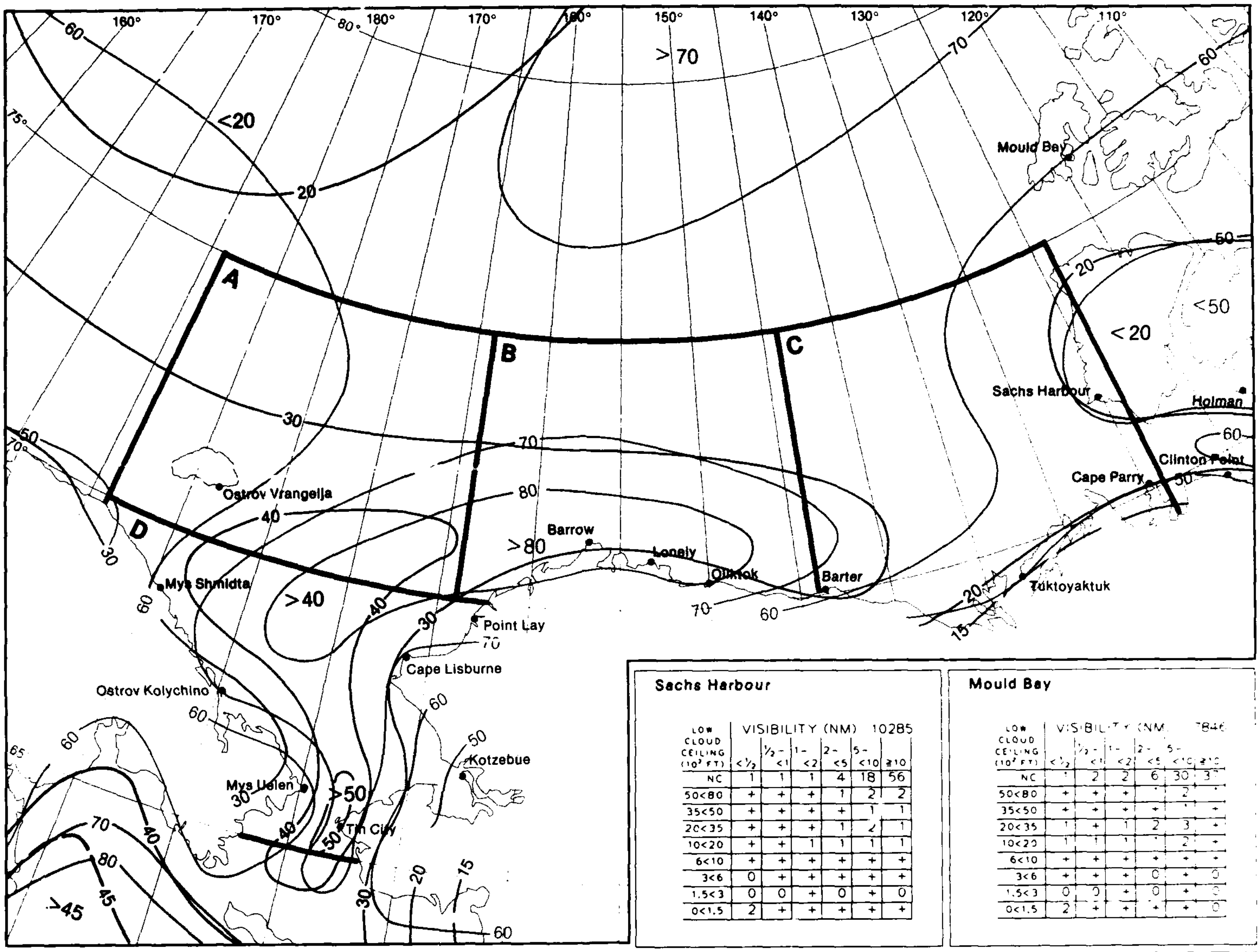
Low cloud ceiling (10^2 ft)	Visibility (NM) 18239: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	2	6	28	42
50<80	+	+	+	1	2	1
35<50	+	+	+	1	1	1
20<35	+	+	1	1	2	1
10<20	1	1	1	1	1	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	0	+	+	+	+	0
0<1.5	2	+	+	+	+	+

Clinton Point

Low cloud ceiling (10^2 ft)	Visibility (NM) 4263: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	+	3	10	61
50<80	+	+	+	+	2	2
35<50	+	+	+	+	2	1
20<35	1	1	+	1	4	2
10<20	1	1	+	1	1	1
6<10	+	+	+	+	+	+
3<6	+	+	0	+	+	+
1.5<3	+	0	0	0	+	+
0<1.5	+	+	+	0	+	0

Holman

Low cloud ceiling (10^2 ft)	Visibility (NM) 2924: <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	2	+	+	1	9	57
50<80	+	+	+	+	2	3
35<50	+	+	+	+	1	1
20<35	1	+	+	1	4	3
10<20	1	1	1	2	3	1
6<10	+	+	+	+	+	+
3<6	+	+	+	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	4	+	+	+	+	0



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10285 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	4	18	56
50<80	+	+	+	1	2	2
35<50	+	+	+	+	1	1
20<35	+	+	+	1	2	1
10<20	+	+	1	1	1	1
6<10	+	+	+	+	+	+
3<6	0	+	+	+	+	+
1.5<3	0	0	+	0	+	0
0<1.5	2	+	+	+	+	+

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7846 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	2	2	6	30	[illegible]
50<80	+	+	+	[illegible]	2	[illegible]
35<50	+	+	+	+	[illegible]	+
20<35	1	+	1	2	3	+
10<20	1	1	1	[illegible]	2	+
6<10	+	+	+	+	+	+
3<6	+	+	+	0	+	0
1.5<3	0	0	+	0	+	0
0<1.5	2	+	+	+	+	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 111 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	1	3	5	53
50<80	0	0	0	0	1	6
35<50	0	0	0	0	0	0
20<35	1	1	1	6	3	5
10<20	0	1	2	4	1	5
6<10	0	0	0	0	0	1
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

Marine Area B

No Data Available

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 316 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	1	1	17	62
50<80	0	0	0	1	2	1
35<50	0	0	0	+	0	0
20<35	0	+	0	1	3	+
10<20	+	0	0	2	3	1
6<10	0	0	0	0	0	0
3<6	0	0	0	+	0	0
1.5<3	0	0	0	0	0	0
0<1.5	2	1	0	+	+	0

Marine Area D

No Data Available

4 Ceiling and Visibility (mid range) **January**

Ostrov Vrangelja

VISIBILITY (NM) 3893

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	3	2	3	10	10	56
50<80	+	+	+	+	+	+
35<50	+	+	+	1	+	1
20<35	1	+	+	2	1	1
10<20	+	+	1	2	1	1
6<10	+	+	+	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	1	0	+	+	0	+

Mys Shmidta

VISIBILITY (NM) 4354

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	7	9	7	9	14	39
50<80	+	+	+	+	1	+
35<50	+	+	+	+	+	+
20<35	1	+	1	2	1	1
10<20	1	1	1	1	+	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	+	+	0
0<1.5	1	+	+	0	0	0

Ostrov Kolychino

VISIBILITY (NM) 2774

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	1	3	7	40	28
50<80	+	1	2	2	2	1
35<50	+	+	+	+	+	+
20<35	+	+	+	1	3	1
10<20	+	+	1	2	1	+
6<10	0	+	+	+	0	+
3<6	0	0	+	+	0	+
1.5<3	0	0	0	0	0	0
0<1.5	+	+	+	0	0	0

Mys Uelen

VISIBILITY (NM) 4347

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	1	3	8	9	50
50<80	0	0	+	0	+	+
35<50	+	0	+	+	+	+
20<35	+	+	1	2	1	2
10<20	1	1	4	7	3	3
6<10	+	+	+	1	+	+
3<6	0	+	+	+	+	+
1.5<3	0	0	+	+	0	0
0<1.5	1	0	0	0	0	0

Tin City

VISIBILITY (NM) 3597

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	8	4	5	10	16	21
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	1
20<35	1	1	1	2	1	1
10<20	1	1	1	2	1	1
6<10	+	1	1	1	2	+
3<6	+	+	+	1	+	+
1.5<3	0	+	+	+	+	0
0<1.5	9	1	+	+	0	0

Kotzebue

VISIBILITY (NM) 13959

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	1	1	3	9	53
50<80	+	+	+	+	1	2
35<50	+	+	+	1	1	2
20<35	+	+	1	2	3	3
10<20	+	+	1	2	2	2
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	+
1.5<3	0	+	0	+	+	+
0<1.5	2	1	1	+	+	+

Cape Lisburne

VISIBILITY (NM) 3958

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	2	2	1	3	17	44
50<80	+	0	+	+	1	1
35<50	+	+	0	+	1	1
20<35	+	1	1	2	5	3
10<20	+	1	1	2	5	1
6<10	0	+	+	1	+	+
3<6	0	0	+	+	+	0
1.5<3	0	0	0	+	+	0
0<1.5	2	1	+	+	0	0

Point Lay

VISIBILITY (NM) 302[illegible]

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	6	4	2	4	33	20
50<80	+	+	+	+	2	+
35<50	0	0	0	+	1	+
20<35	+	+	+	1	4	[illegible]
10<20	2	1	1	3	8	[illegible]
6<10	+	+	+	+	+	0
3<6	+	+	+	0	+	+
1.5<3	0	+	0	0	+	+
0<1.5	4	+	+	+	+	+

Barrow

VISIBILITY (NM) 13335

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	2	2	3	7	46	10
50<80	+	+	+	1	3	+
35<50	+	+	+	+	1	+
20<35	+	1	1	2	4	+
10<20	+	1	1	2	4	+
6<10	+	+	+	1	2	+
3<6	+	+	+	+	1	+
1.5<3	+	+	+	+	+	0
0<1.5	1	+	+	+	0	0

Lonely

VISIBILITY (NM) 3073

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	2	1	2	3	42	23
50<80	+	+	+	+	2	1
35<50	+	0	+	+	1	+
20<35	+	+	+	1	4	1
10<20	1	1	1	1	7	1
6<10	+	+	+	+	1	0
3<6	+	+	+	+	+	0
1.5<3	0	+	0	+	+	0
0<1.5	1	1	+	+	0	0

Oliktok

VISIBILITY (NM) 3059

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	3	2	2	4	42	18
50<80	+	+	+	+	2	1
35<50	+	+	+	+	1	+
20<35	1	+	+	1	4	1
10<20	1	1	1	2	8	+
6<10	+	+	+	+	+	0
3<6	+	+	+	+	+	0
1.5<3	0	+	+	0	+	0
0<1.5	1	+	+	+	+	+

Barter

VISIBILITY (NM) 14226

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	4	2	2	4	20	36
50<80	1	1	+	1	3	2
35<50	1	+	+	1	1	+
20<35	1	1	1	2	3	1
10<20	1	1	1	1	1	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	+	0	+	+	+	+
0<1.5	5	1	+	+	+	0

Tuktoyaktuk

VISIBILITY (NM) 2759

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	1	+	2	16	54
50<80	+	+	+	1	3	3
35<50	0	+	+	+	1	1
20<35	+	+	+	1	3	1
10<20	+	1	1	1	3	1
6<10	+	+	+	+	+	+
3<6	0	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	1	+	+	+	+	0

Cape Perry

VISIBILITY (NM) 16876

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	2	2	2	6	27	45
50<80	+	+	+	1	1	1
35<50	+	+	+	+	1	+
20<35	+	+	+	1	2	+
10<20	+	+	+	1	1	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	0	+	+	+	0	0
0<1.5	1	+	+	+	+	+

Clinton Point

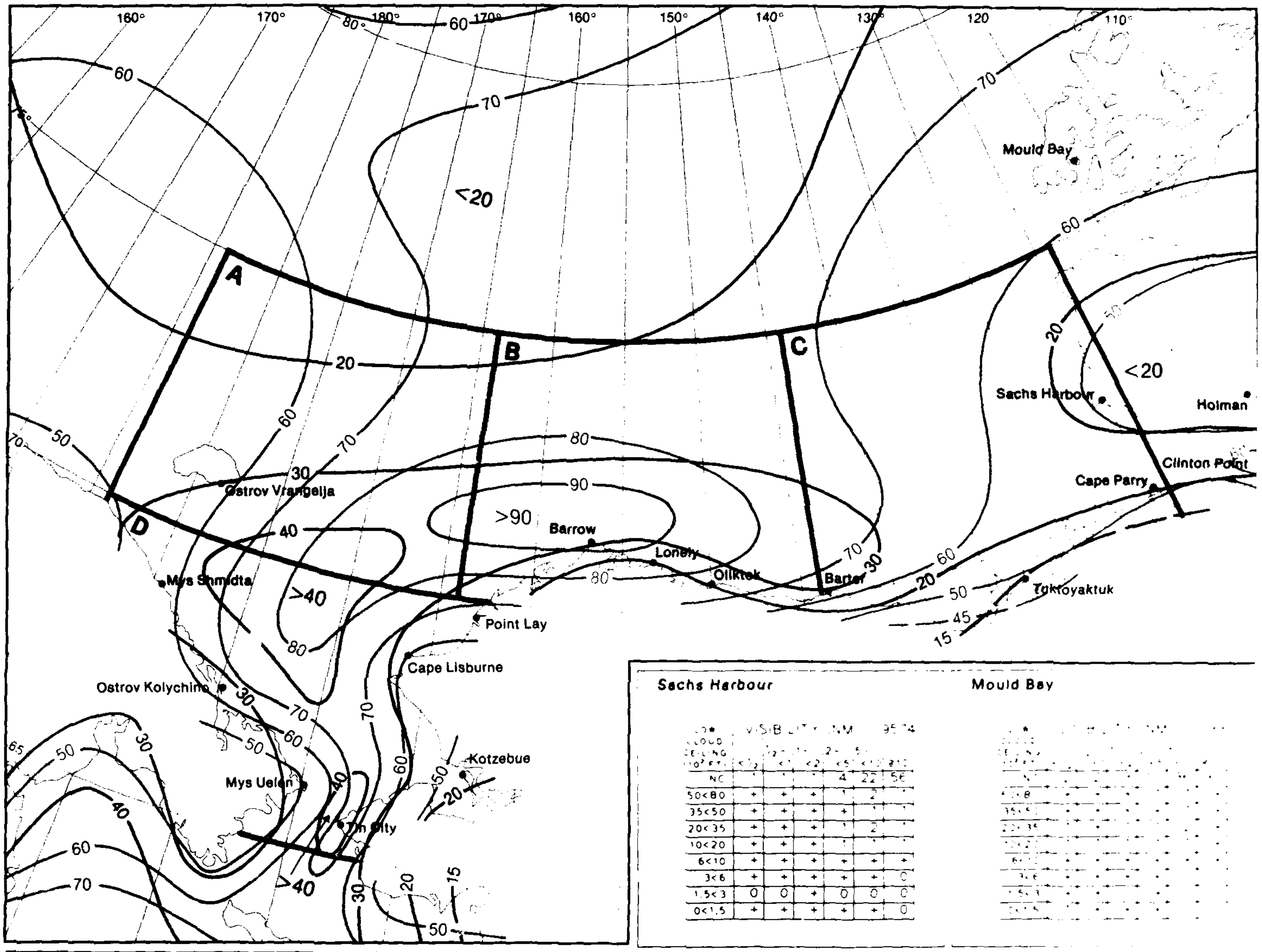
VISIBILITY (NM) 3907

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	1	2	10	65
50<80	1	+	+	+	2	3
35<50	+	+	+	+	2	2
20<35	+	+	+	1	2	2
10<20	1	+	+	1	1	+
6<10	+	+	+	+	+	+
3<6	+	0	+	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	+	+	+	+	0	0

Holmen

VISIBILITY (NM) 2739

LOW CLOUD CEILING (10^2 FT)	< 1/2	1/2 - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	1	+	2	9	63
50<80	+	+	+	+	2	2
35<50	+	+	+	+	1	1
20<35	+	+	+	1	3	2
10<20	1	+	1	1	2	1
6<10	+	+	+	+	+	+
3<6	+	0	0	0	0	0
1.5<3	0	0	0	+	0	0
0<1.5	2	+	+	0	0	0



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 95 74 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	[illegible]	[illegible]	[illegible]	4	22	56
50<80	+	+	+	1	2	[illegible]
35<50	+	+	+	+	[illegible]	[illegible]
20<35	+	+	+	1	2	[illegible]
10<20	+	+	+	1	[illegible]	[illegible]
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	0	0	+	0	0	0
0<1.5	+	+	+	+	+	0

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50<80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35<50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20<35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10<20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6<10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3<6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.5<3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0<1.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 102 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	1	0	4	6	67
50<80	0	0	0	2	0	3
35<50	0	0	0	0	0	0
20<35	0	0	0	1	1	3
10<20	0	0	0	2	1	2
6<10	0	1	0	1	0	2
3<6	0	0	1	0	0	0
1.5<3	0	0	0	0	0	2
0<1.5	0	0	0	0	0	1

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 64 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	3	3	55	3
50<80	0	0	0	0	0	0
35<50	0	0	2	2	0	0
20<35	0	0	0	0	0	0
10<20	2	0	0	5	3	0
6<10	2	0	2	2	2	0
3<6	2	0	2	0	0	0
1.5<3	0	2	2	0	0	0
0<1.5	5	0	0	6	0	0

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 280 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	1	2	15	74
50<80	0	+	+	1	1	1
35<50	0	0	0	0	0	+
20<35	0	0	+	0	1	0
10<20	0	0	0	0	0	0
6<10	0	0	0	+	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50<80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35<50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20<35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10<20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6<10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3<6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.5<3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0<1.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

4 Ceiling and Visibility (mid range) **Februa**

Ostrov Vrangelja

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 4385 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	4	2	4	9	8	60
50<80	+	0	+	+	+	+
35<50	+	+	+	+	+	+
20<35	+	+	1	1	1	1
10<20	+	+	1	2	1	1
6<10	+	+	+	+	+	+
3<6	0	+	+	+	+	0
1.5<3	0	0	+	0	0	0
0<1.5	+	0	0	+	0	0

Mys Shmidta

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 4868 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	8	7	6	9	13	46
50<80	+	+	+	+	+	+
35<50	0	+	+	+	+	+
20<35	+	+	1	1	1	+
10<20	1	1	1	1	1	1
6<10	+	+	+	+	+	+
3<6	0	+	+	+	+	+
1.5<3	0	+	0	0	0	0
0<1.5	1	0	0	0	0	0

Ostrov Kolychino

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 3024 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	1	3	5	36	39
50<80	+	+	1	2	2	1
35<50	0	+	+	+	+	+
20<35	+	+	+	1	2	1
10<20	+	+	+	1	1	+
6<10	0	0	+	+	+	0
3<6	0	0	0	+	0	0
1.5<3	0	0	0	0	0	+
0<1.5	+	+	+	0	0	+

Mys Uelen

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 4856 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	2	10	6	54
50<80	0	0	+	+	+	+
35<50	0	0	+	+	+	+
20<35	+	+	+	2	1	2
10<20	+	1	3	7	2	4
6<10	+	+	+	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	0	0	0
0<1.5	1	0	0	0	0	+

Tin City

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 4194 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	6	5	5	[illegible]	12	22
50<80	1	1	1	1	1	2
35<50	+	+	+	+	1	+
20<35	4	1	2	2	2	+
10<20	2	1	2	2	2	1
6<10	1	1	1	2	+	+
3<6	+	+	+	+	+	+
1.5<3	0	+	0	+	+	0
0<1.5	[illegible]	1	+	+	0	[illegible]

Kotzebue

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 15306 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	1	3	[illegible]	57
50<80	+	+	+	+	1	3
35<50	+	+	+	+	1	2
20<35	+	+	1	2	3	3
10<20	+	+	1	2	2	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	+	+
0<1.5	2	1	1	+	+	0

Cape Lisburne

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 4712 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	2	4	16	47
50<80	0	+	+	1	1	2
35<50	0	+	+	+	1	1
20<35	+	+	1	2	5	3
10<20	+	+	1	2	2	1
6<10	+	+	+	+	+	+
3<6	0	+	0	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	1	1	1	+	0	0

Point Lay

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 3337 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	9	3	2	5	34	[illegible]
50<80	+	+	+	+	1	+
35<50	+	0	+	+	+	+
20<35	1	+	+	+	3	1
10<20	2	1	1	2	5	2
6<10	+	+	+	+	+	[illegible]
3<6	+	+	0	+	0	0
1.5<3	0	0	0	0	+	0
0<1.5	3	+	+	+	+	[illegible]

Barrow

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) [illegible] <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	2	6	[illegible]	[illegible]
50<80	+	+	+	1	3	+
35<50	+	+	+	+	1	+
20<35	+	+	1	2	4	+
10<20	+	+	1	2	3	+
6<10	+	+	+	1	1	0
3<6	+	+	+	+	+	0
1.5<3	+	0	+	+	+	+
0<1.5	1	+	+	+	+	0

Lonely

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) [illegible] <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	2	2	4	46	23
50<80	+	+	+	+	2	+
35<50	0	0	+	+	1	+
20<35	+	+	+	1	3	1
10<20	1	1	1	2	4	1
6<10	+	+	+	+	1	0
3<6	+	+	+	+	+	0
1.5<3	0	0	0	+	+	0
0<1.5	2	+	+	+	0	0

Oliktok

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 3367 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	2	3	2	4	45	20
50<80	+	+	+	+	2	1
35<50	0	+	+	+	1	+
20<35	1	+	+	1	4	1
10<20	1	1	1	1	5	1
6<10	+	+	+	+	+	0
3<6	+	+	+	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	2	+	+	+	+	0

Barter

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) [illegible] <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	5	3	2	4	[illegible]	[illegible]
50<80	+	+	+	1	3	2
35<50	+	+	+	+	1	+
20<35	1	1	1	1	3	1
10<20	1	1	1	1	2	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	+	0	+	+	0
0<1.5	2	+	+	+	+	[illegible]

Tuktoyaktuk

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 3113 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	1	2	15	61
50<80	+	+	+	+	2	2
35<50	0	+	+	+	1	1
20<35	+	+	+	1	3	1
10<20	+	+	1	1	3	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	1	+	+	+	0	0

Cape Parry

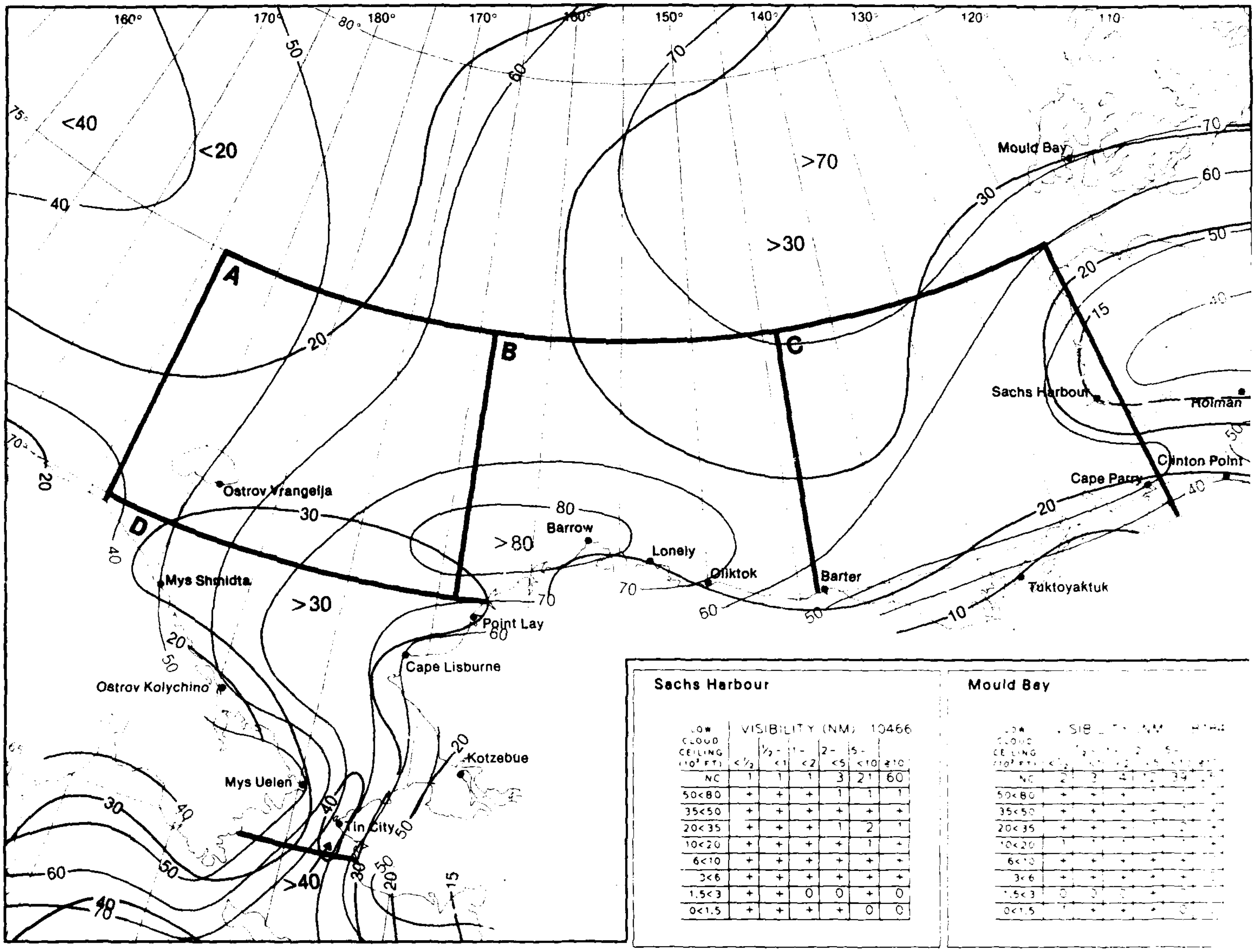
LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 18857 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	2	2	2	7	26	49
50<80	+	+	+	+	1	+
35<50	+	+	+	+	1	+
20<35	+	+	+	1	2	1
10<20	+	+	+	1	1	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	0	+	+	+	0
0<1.5	+	+	+	+	+	0

Clinton Point

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) 4368 <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	1	3	16	65
50<80	+	+	+	1	3	2
35<50	+	+	+	1	1	+
20<35	+	+	1	1	1	1
10<20	+	+	+	+	+	+
6<10	+	0	+	+	0	0
3<6	+	+	0	+	0	0
1.5<3	0	0	0	0	0	0
0<1.5	1	0	0	+	0	0

Holman

LOW CLOUD CEILING (10² FT)	VISIBILITY (NM) [illegible] <½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	1	2	[illegible]	66
50<80	+	+	+	+	2	2
35<50	+	+	+	+	1	1
20<35	+	1	1	1	3	2
10<20	1	1	1	1	1	1
6<10	+	+	+	+	+	0
3<6	+	0	+	+	0	0
1.5<3	0	0	0	0	0	0
0<1.5	1	+	0	0	0	0



Sachs Harbour

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 10466					
	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	1	1	3	21	60
50<80	+	+	+	1	1	1
35<50	+	+	+	+	+	+
20<35	+	+	+	1	2	1
10<20	+	+	+	+	1	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	+	0	0	+	0
0<1.5	+	+	+	+	0	0

Mould Bay

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) [illegible]					
	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	2	3	4	[illegible]	39	[illegible]
50<80	+	+	+	[illegible]	[illegible]	+
35<50	+	+	+	+	[illegible]	+
20<35	+	+	+	[illegible]	[illegible]	+
10<20	1	[illegible]	[illegible]	[illegible]	[illegible]	+
6<10	+	+	+	+	+	[illegible]
3<6	+	+	+	+	+	[illegible]
1.5<3	0	0	[illegible]	+	[illegible]	[illegible]
0<1.5	[illegible]	+	+	+	0	[illegible]

Marine Area A

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 189					
	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	0	0	2	2	21	44
50<80	0	1	0	3	3	1
35<50	0	0	0	0	1	0
20<35	0	2	1	1	0	2
10<20	1	0	3	3	3	2
6<10	1	0	0	2	0	1
3<6	1	1	0	1	0	1
1.5<3	0	0	0	0	0	0
0<1.5	1	1	1	0	0	0

Marine Area B

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 54					
	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	0	0	0	2	70	2
50<80	0	0	0	2	0	2
35<50	0	0	0	0	0	0
20<35	0	0	0	0	2	0
10<20	0	2	2	4	2	0
6<10	0	0	2	4	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	4	2	0	0	0	0

Marine Area C

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 273					
	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	2	2	2	5	79
50<80	0	0	0	+	2	2
35<50	+	0	0	0	0	0
20<35	0	0	0	+	1	+
10<20	+	1	+	0	0	1
6<10	0	+	+	0	0	0
3<6	0	0	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

Marine Area D

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) [illegible]					
	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	0	0	0	[illegible]	[illegible]	[illegible]
50<80	0	0	0	0	[illegible]	[illegible]
35<50	0	0	0	[illegible]	3	[illegible]
20<35	0	0	[illegible]	0	[illegible]	[illegible]
10<20	0	0	3	5	10	[illegible]
6<10	0	0	0	0	[illegible]	[illegible]
3<6	0	1	1	0	3	[illegible]
1.5<3	0	0	0	[illegible]	0	[illegible]
0<1.5	1	0	2	2	[illegible]	[illegible]

4 Ceiling and Visibility (mid range)

Mar

Ostrov Vrangelja

VISIBILITY (NM) 4426

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	4	8	5	63
50<80	+	0	+	+	+	+
35<50	0	+	+	+	+	+
20<35	+	+	+	2	1	2
10<20	+	+	1	3	1	2
6<10	+	+	+	1	+	1
3<6	0	+	+	+	+	+
1.5<3	0	0	0	+	0	0
0<1.5	1	0	0	+	0	0

Mys Shmidta

VISIBILITY (NM) 4663

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	3	4	4	8	10	54
50<80	+	+	+	+	+	+
35<50	+	0	+	+	+	1
20<35	+	+	+	1	1	1
10<20	1	1	1	2	2	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	0	0
0<1.5	1	+	+	0	0	+

Ostrov Kolychino

VISIBILITY (NM) 2751

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	2	5	24	46
50<80	+	+	2	2	2	1
35<50	0	+	+	+	+	+
20<35	0	+	+	1	3	3
10<20	0	+	1	2	1	1
6<10	0	0	0	+	+	+
3<6	0	+	0	+	+	+
1.5<3	0	0	0	0	+	0
0<1.5	1	+	+	0	0	0

Mys Uelen

VISIBILITY (NM) 4646

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	1	6	4	48
50<80	0	+	+	+	+	+
35<50	0	+	+	+	+	+
20<35	+	+	+	2	1	4
10<20	+	1	3	10	5	8
6<10	+	+	+	1	+	1
3<6	+	0	+	+	+	+
1.5<3	0	0	+	0	0	0
0<1.5	1	+	+	+	0	0

Tin City

VISIBILITY (NM) 4236

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	3	3	4	6	9	21
50<80	+	+	+	+	+	+
35<50	+	+	+	+	+	1
20<35	1	2	1	2	3	2
10<20	1	1	1	2	3	2
6<10	1	1	1	3	2	+
3<6	1	1	2	2	1	+
1.5<3	+	+	+	+	+	+
0<1.5	10	1	1	+	0	0

Kotzebue

VISIBILITY (NM) 14888

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	2	5	58
50<80	+	+	+	+	1	3
35<50	+	+	+	+	1	2
20<35	+	+	1	2	2	4
10<20	+	+	1	1	2	3
6<10	+	+	+	1	1	1
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	1	+	+

Cape Lisburne

VISIBILITY (NM) 4500

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	1	1	2	11	39
50<80	0	+	+	+	1	2
35<50	0	+	+	+	1	1
20<35	1	1	1	2	5	5
10<20	+	1	1	3	8	4
6<10	0	+	1	1	2	1
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	+
0<1.5	1	1	+	+	0	0

Point Lay

VISIBILITY (NM) 3171

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	8	2	3	4	29	20
50<80	+	+	+	+	2	+
35<50	0	0	+	0	1	+
20<35	1	+	+	1	5	2
10<20	2	2	2	3	7	2
6<10	1	+	+	+	1	+
3<6	+	+	+	+	+	0
1.5<3	+	0	0	0	0	+
0<1.5	2	+	+	0	0	0

Barrow

VISIBILITY (NM) 14399

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	1	4	45	12
50<80	+	+	+	+	3	+
35<50	+	+	+	+	2	+
20<35	+	+	+	1	4	+
10<20	+	+	1	3	7	+
6<10	+	1	1	2	4	+
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	0

Lonely

VISIBILITY (NM) 3219

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	2	1	3	38	22
50<80	0	+	+	+	2	1
35<50	0	0	+	+	1	+
20<35	+	+	1	1	4	1
10<20	1	1	1	3	9	1
6<10	+	+	+	1	1	+
3<6	+	+	+	+	+	0
1.5<3	+	+	0	+	+	0
0<1.5	1	+	+	+	+	0

Oliktok

VISIBILITY (NM) 3221

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	2	3	40	19
50<80	+	+	+	+	3	1
35<50	0	+	+	+	1	+
20<35	+	+	1	1	5	1
10<20	1	1	1	3	8	+
6<10	+	+	+	+	1	0
3<6	+	+	+	+	+	0
1.5<3	+	0	+	+	0	0
0<1.5	2	+	0	+	0	0

Barter

VISIBILITY (NM) 15839

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	2	1	3	14	44
50<80	+	+	+	1	2	3
35<50	+	+	+	+	1	+
20<35	+	+	1	2	2	1
10<20	1	1	1	2	3	2
6<10	+	+	1	1	2	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	+	+
0<1.5	2	+	+	+	+	0

Tuktoyaktuk

VISIBILITY (NM) 3030

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	1	1	9	61
50<80	0	+	+	+	2	3
35<50	+	+	+	+	1	1
20<35	+	+	1	1	4	2
10<20	+	1	1	1	3	1
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	0	0	0
0<1.5	1	+	+	+	0	0

Cape Parry

VISIBILITY (NM) 18148

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	2	5	19	51
50<80	+	+	+	1	1	1
35<50	+	+	+	+	1	+
20<35	+	+	+	1	1	1
10<20	1	1	1	1	2	1
6<10	+	+	+	1	1	+
3<6	+	+	+	+	1	+
1.5<3	+	+	+	+	+	0
0<1.5	1	+	+	+	0	0

Clinton Point

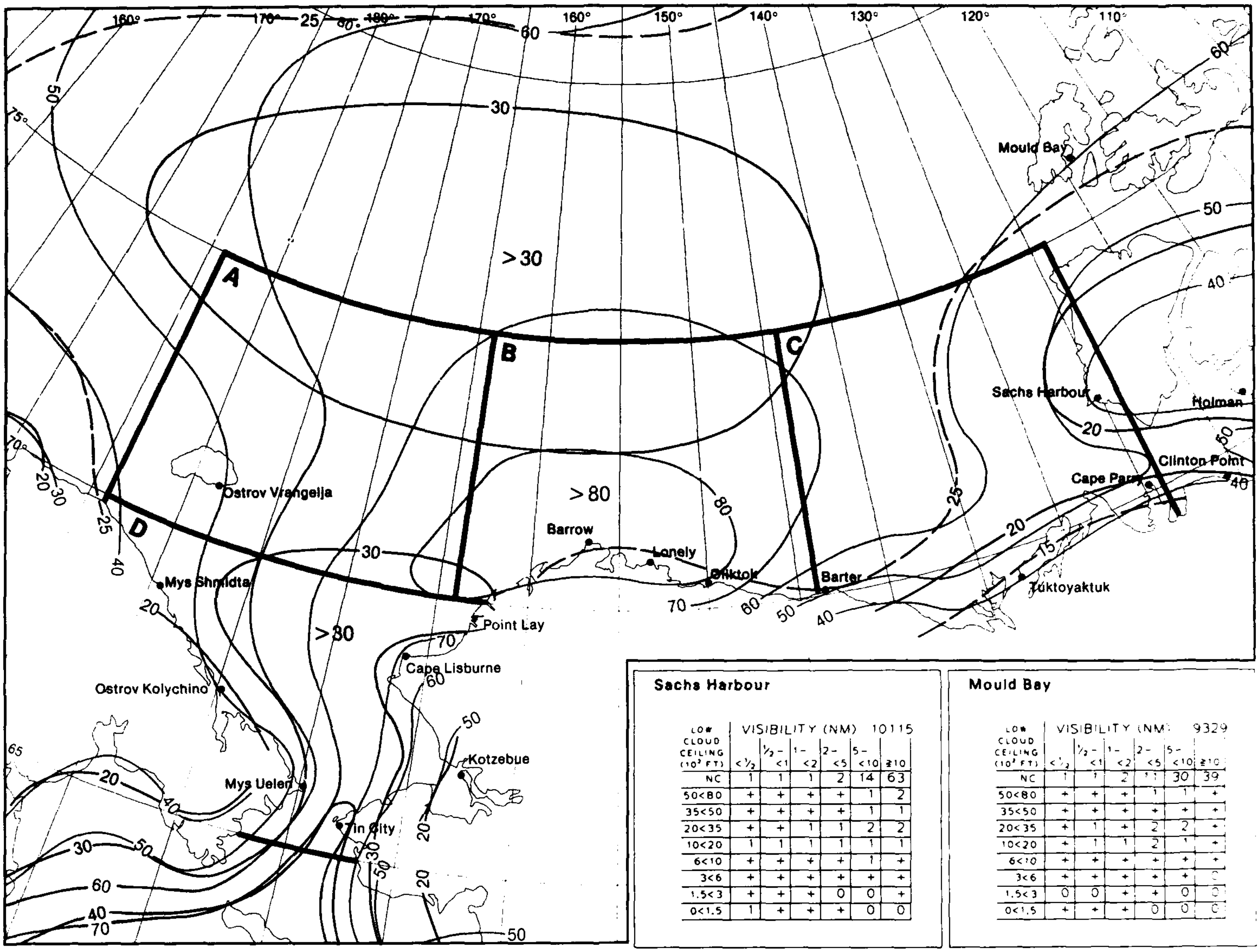
VISIBILITY (NM) 4100

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	1	1	2	9	60
50<80	+	+	1	1	2	2
35<50	+	+	+	+	1	1
20<35	+	+	+	1	3	1
10<20	1	+	1	2	3	1
6<10	+	+	+	+	2	+
3<6	+	+	+	+	+	0
1.5<3	+	0	0	+	0	0
0<1.5	1	+	+	0	0	0

Holman

VISIBILITY (NM) 2973

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	8	60
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	1
20<35	+	+	+	1	3	3
10<20	1	1	1	3	3	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	0	+
1.5<3	0	+	0	0	0	0
0<1.5	1	+	+	+	+	0



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (10115)
NC	1	1	1	2	14	63
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	1
20<35	+	+	1	1	2	2
10<20	1	1	1	1	1	1
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	0	0	+
0<1.5	1	+	+	+	0	0

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (9329)
NC	1	1	2	11	30	39
50<80	+	+	+	1	1	+
35<50	+	+	+	+	+	+
20<35	+	1	+	2	2	+
10<20	+	1	1	2	1	+
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	0	0	+	+	0	0
0<1.5	+	+	+	0	0	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (180)
NC	0	1	1	4	4	53
50<80	0	0	0	3	4	3
35<50	0	0	0	0	1	1
20<35	0	0	0	3	2	1
10<20	0	1	2	3	3	1
6<10	0	1	1	2	0	2
3<6	0	0	0	2	0	0
1.5<3	0	0	0	0	0	0
0<1.5	2	1	2	1	0	0

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (189)
NC	0	0	0	2	52	1
50<80	0	0	0	2	3	0
35<50	0	0	0	1	2	0
20<35	0	0	0	1	3	1
10<20	0	0	1	8	3	1
6<10	0	2	3	3	0	0
3<6	0	0	0	1	1	0
1.5<3	0	0	0	0	0	1
0<1.5	6	3	3	0	0	0

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (166)
NC	3	3	1	4	11	54
50<80	0	0	1	1	4	2
35<50	0	0	0	0	0	0
20<35	1	0	0	1	5	1
10<20	0	0	0	2	2	0
6<10	0	0	0	1	1	0
3<6	1	0	0	1	1	0
1.5<3	0	0	1	0	1	0
0<1.5	0	0	0	0	0	0

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (1[illegible]4)
NC	0	0	0	1	49	5
50<80	0	0	0	0	5	0
35<50	0	0	0	0	1	1
20<35	1	0	0	0	2	0
10<20	0	1	0	5	9	0
6<10	0	1	2	5	1	0
3<6	1	1	1	2	1	0
1.5<3	0	0	0	0	0	0
0<1.5	1	3	2	1	0	0

4 Ceiling and Visibility (mid range)

April

Ostrov Vrangelja

VISIBILITY (NM) 4395

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	+	1	4	3	33
50<80	+	+	0	+	+	+
35<50	+	+	+	+	+	1
20<35	+	+	+	2	1	5
10<20	+	1	1	6	4	12
6<10	+	+	+	3	3	6
3<6	+	+	+	2	1	2
1.5<3	+	+	+	+	+	+
0<1.5	4	+	+	0	0	+

Mys Shmidta

VISIBILITY (NM) 4630

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	2	1	1	3	3	34
50<80	+	+	+	+	+	1
35<50	0	+	+	+	+	1
20<35	+	+	+	1	1	3
10<20	+	1	2	3	4	5
6<10	+	1	1	2	3	4
3<6	+	2	2	3	3	3
1.5<3	+	1	1	1	+	+
0<1.5	5	+	+	0	+	+

Ostrov Kolychino

VISIBILITY (NM) 2919

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	+	1	2	3	30
50<80	+	+	1	1	1	1
35<50	0	0	+	+	+	1
20<35	+	+	+	2	4	9
10<20	+	+	2	4	7	12
6<10	+	0	+	2	3	3
3<6	0	+	1	2	1	1
1.5<3	0	0	+	+	+	+
0<1.5	6	+	0	0	+	+

Mys Uelen

VISIBILITY (NM) 4651

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	+	+	2	1	27
50<80	0	0	0	+	0	+
35<50	0	0	+	+	+	1
20<35	+	+	+	1	1	10
10<20	+	+	2	8	5	21
6<10	0	+	+	2	2	5
3<6	0	+	+	1	1	[illegible]
1.5<3	0	+	+	+	+	+
0<1.5	4	0	+	+	0	+

Tin City

VISIBILITY (NM) 4747

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	2	1	1	1	2	24
50<80	+	+	+	+	+	2
35<50	+	+	+	+	+	3
20<35	1	1	2	2	2	5
10<20	1	+	+	2	3	5
6<10	+	+	1	2	6	3
3<6	+	1	1	3	3	1
1.5<3	0	+	+	+	1	+
0<1.5	13	1	+	+	0	0

Kotzebue

VISIBILITY (NM) 14873

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	+	+	+	+	1	61
50<80	+	+	+	+	+	4
35<50	+	+	+	+	+	3
20<35	+	+	+	+	1	6
10<20	+	+	+	1	2	6
6<10	+	+	+	1	2	3
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	+	+	+

Cape Lisburne

VISIBILITY (NM) 4898

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	+	+	1	4	27
50<80	+	0	0	+	+	2
35<50	+	0	0	+	+	2
20<35	+	+	+	1	3	6
10<20	+	+	1	2	10	12
6<10	+	+	1	1	8	7
3<6	+	+	+	1	2	1
1.5<3	+	+	+	0	+	+
0<1.5	2	1	1	+	+	0

Point Lay

VISIBILITY (NM) 3189

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	2	1	1	1	13	22
50<80	+	+	+	+	1	[illegible]
35<50	+	0	+	+	1	[illegible]
20<35	+	+	+	1	6	5
10<20	2	2	2	3	16	9
6<10	1	+	+	1	2	[illegible]
3<6	+	+	+	+	1	+
1.5<3	+	0	0	0	+	+
0<1.5	2	+	+	+	0	0

Barrow

VISIBILITY (NM) 14855

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	1	+	1	17	6
50<80	+	+	+	+	1	+
35<50	+	0	0	+	1	+
20<35	+	+	+	1	5	1
10<20	+	+	1	3	16	1
6<10	+	1	1	4	16	1
3<6	1	1	1	3	7	+
1.5<3	+	+	+	+	+	0
0<1.5	4	1	+	+	+	+

Lonely

VISIBILITY (NM) 3249

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	1	+	1	15	10
50<80	+	0	+	+	1	[illegible]
35<50	+	0	0	0	1	+
20<35	+	+	+	1	5	3
10<20	1	1	2	4	22	5
6<10	1	1	1	2	7	+
3<6	1	1	1	1	3	+
1.5<3	+	+	+	+	+	0
0<1.5	3	1	+	+	+	0

Oliktok

VISIBILITY (NM) 3223

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	1	1	1	14	10
50<80	0	0	+	+	2	2
35<50	0	+	0	+	1	+
20<35	+	1	1	1	8	2
10<20	1	2	2	5	21	2
6<10	1	1	1	2	4	+
3<6	1	1	1	1	2	+
1.5<3	+	0	0	+	+	0
0<1.5	4	1	1	+	0	0

Barter

VISIBILITY (NM) 16[illegible]72

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	1	+	1	3	24
50<80	+	+	+	+	+	2
35<50	+	0	+	+	+	1
20<35	+	+	1	1	3	3
10<20	+	1	1	2	8	5
6<10	1	1	1	3	8	5
3<6	1	2	2	3	5	2
1.5<3	+	+	+	+	+	+
0<1.5	4	1	+	+	+	+

Tuktoyaktuk

VISIBILITY (NM) 3077

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	+	+	+	+	4	46
50<80	0	0	+	+	1	4
35<50	+	0	0	0	+	1
20<35	+	+	+	1	3	5
10<20	+	+	1	2	9	6
6<10	+	1	+	1	3	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	3	+	+	+	+	0

Cape Parry

VISIBILITY (NM) 16661

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	1	1	1	7	45
50<80	+	+	+	+	+	1
35<50	0	+	+	+	+	1
20<35	+	+	+	+	1	2
10<20	+	+	1	2	6	6
6<10	+	+	+	1	4	3
3<6	+	1	1	2	3	1
1.5<3	+	1	+	+	+	+
0<1.5	2	1	+	+	+	+

Clinton Point

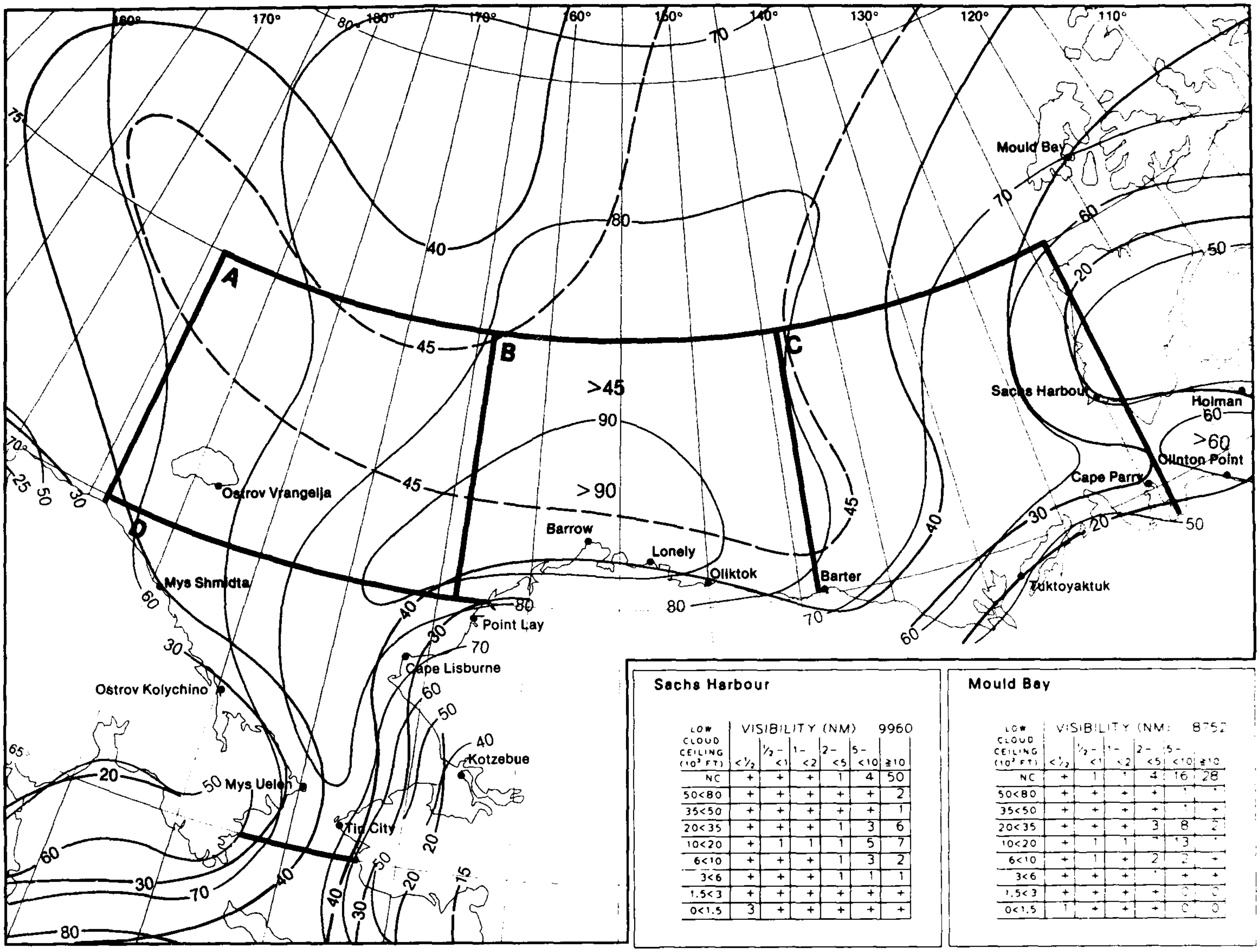
VISIBILITY (NM) 3851

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	+	+	+	+	4	48
50<80	+	+	+	+	1	3
35<50	+	+	+	+	+	2
20<35	+	+	+	1	4	6
10<20	1	1	1	2	5	6
6<10	1	+	1	1	2	2
3<6	1	+	+	1	2	+
1.5<3	0	+	+	+	+	+
0<1.5	1	+	+	+	0	0

Holman

VISIBILITY (NM) 2939

LOW CLOUD CEILING (10^2 FT)	< ½	½ – < 1	1 – < 2	2 – < 5	5 – < 10	≥ 10
NC	1	+	+	1	3	45
50<80	+	+	+	+	1	3
35<50	+	+	0	+	+	2
20<35	+	+	+	1	3	7
10<20	1	1	1	2	7	7
6<10	+	+	+	1	1	1
3<6	+	+	+	+	1	+
1.5<3	+	+	0	+	+	+
0<1.5	5	+	+	+	+	+



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) $<\frac{1}{2}$	$\frac{1}{2}$ - <1	1- <2	2- <5	5- <10	≥ 10 9960
NC	+	+	+	1	4	50
50<80	+	+	+	+	+	2
35<50	+	+	+	+	+	1
20<35	+	+	+	1	3	6
10<20	+	1	1	1	5	7
6<10	+	+	+	1	3	2
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	3	+	+	+	+	+

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) $<\frac{1}{2}$	$\frac{1}{2}$ - <1	1- <2	2- <5	5- <10	≥ 10 8752
NC	+	1	[illegible]	4	16	28
50<80	+	+	+	+	[illegible]	[illegible]
35<50	+	+	+	+	[illegible]	+
20<35	+	+	+	3	8	2
10<20	+	1	1	[illegible]	[illegible]	[illegible]
6<10	+	1	+	2	2	+
3<6	+	+	+	[illegible]	+	+
1.5<3	+	+	+	+	0	0
0<1.5	1	+	+	+	0	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) $<\frac{1}{2}$	$\frac{1}{2}$ - <1	1- <2	2- <5	5- <10	≥ 10 154
NC	1	0	0	1	8	38
50<80	1	1	0	0	0	2
35<50	0	0	0	1	1	1
20<35	1	0	1	1	1	6
10<20	0	1	3	1	6	6
6<10	2	0	1	2	2	1
3<6	2	1	1	2	0	0
1.5<3	0	1	1	0	0	0
0<1.5	5	0	0	0	0	0

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) $<\frac{1}{2}$	$\frac{1}{2}$ - <1	1- <2	2- <5	5- <10	≥ 10 36
NC	0	0	0	0	31	6
50<80	0	0	0	0	0	3
35<50	0	0	0	0	0	0
20<35	0	0	0	0	8	0
10<20	0	3	0	0	39	0
6<10	0	0	3	0	6	0
3<6	0	0	0	0	3	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) $<\frac{1}{2}$	$\frac{1}{2}$ - <1	1- <2	2- <5	5- <10	≥ 10 289
NC	1	1	1	2	9	61
50<80	0	0	0	0	+	3
35<50	0	0	0	0	0	1
20<35	0	0	0	+	1	4
10<20	0	0	0	+	2	4
6<10	0	+	0	1	1	0
3<6	0	+	+	1	+	+
1.5<3	+	+	0	0	2	+
0<1.5	0	0	0	0	0	0

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) $<\frac{1}{2}$	$\frac{1}{2}$ - <1	1- <2	2- <5	5- <10	≥ 10 180
NC	1	1	0	1	33	[illegible]
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	0
20<35	0	0	0	1	8	1
10<20	0	0	1	2	23	2
6<10	0	0	2	3	4	1
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	3	1	1	1	0	0

4 Ceiling and Visibility (mid range) **May**

Ostrov Vrangelja

VISIBILITY (NM) 4285

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	2	1	34
50<80	0	+	0	+	+	+
35<50	0	+	+	+	+	2
20<35	+	+	+	+	+	6
10<20	+	+	+	3	3	13
6<10	0	+	1	4	3	8
3<6	+	+	1	3	2	2
1.5<3	0	+	+	+	+	+
0<1.5	8	+	0	+	+	+

Mys Shmidta

VISIBILITY (NM) 4513

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	1	1	1	42
50<80	0	+	+	+	+	1
35<50	0	+	+	+	+	2
20<35	+	+	+	+	+	3
10<20	+	+	+	1	2	4
6<10	+	+	1	1	2	4
3<6	+	3	3	4	3	4
1.5<3	+	1	1	1	+	+
0<1.5	9	+	+	+	0	+

Ostrov Kolychino

VISIBILITY (NM) 2800

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	1	1	2	44
50<80	+	0	+	+	+	2
35<50	0	0	0	0	0	1
20<35	+	+	+	+	1	9
10<20	+	+	+	2	3	7
6<10	+	+	1	1	2	2
3<6	0	+	1	1	2	1
1.5<3	0	+	+	+	+	+
0<1.5	14	+	+	+	0	+

Mys Uelen

VISIBILITY (NM) 4478

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	2	+	+	1	2	41
50<80	0	0	0	+	0	+
35<50	0	0	0	0	+	1
20<35	+	0	+	+	+	6
10<20	+	+	1	3	5	12
6<10	0	+	1	2	2	3
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	9	+	0	+	+	+

Tin City

VISIBILITY (NM) 4879

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	3	1	1	1	2	27
50<80	+	+	+	+	+	3
35<50	+	+	+	0	+	3
20<35	+	+	+	+	1	4
10<20	+	+	+	1	2	4
6<10	+	+	+	2	3	2
3<6	1	1	1	4	4	1
1.5<3	+	+	+	+	+	+
0<1.5	24	2	1	+	+	+

Kotzebue

VISIBILITY (NM) 15013

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	+	1	60
50<80	0	+	+	+	+	4
35<50	+	+	0	+	+	3
20<35	+	0	+	+	1	7
10<20	+	+	+	+	1	5
6<10	+	+	+	+	1	3
3<6	+	+	+	1	2	2
1.5<3	+	+	+	+	+	+
0<1.5	3	1	+	+	+	+

Cape Lisburne

VISIBILITY (NM) 4675

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	1	6	29
50<80	+	+	+	+	+	5
35<50	+	+	+	+	1	2
20<35	+	+	+	1	2	4
10<20	+	+	+	1	5	6
6<10	+	+	1	1	8	5
3<6	+	1	+	1	3	1
1.5<3	+	+	+	+	+	0
0<1.5	6	2	1	+	+	0

Point Lay

VISIBILITY (NM) 313[illegible]

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	+	8	32
50<80	+	+	0	0	1	3
35<50	0	0	0	+	+	2
20<35	+	+	+	+	3	9
10<20	1	1	1	1	11	14
6<10	+	+	+	[illegible]	2	[illegible]
3<6	+	+	+	[illegible]	[illegible]	+
1.5<3	+	+	0	+	+	+
0<1.5	3	+	+	+	+	+

Barrow

VISIBILITY (NM) 15117

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	1	19	10
50<80	+	+	+	+	2	1
35<50	+	+	+	+	1	+
20<35	+	+	+	+	3	1
10<20	+	+	+	1	9	1
6<10	+	+	1	3	14	1
3<6	1	2	2	4	10	1
1.5<3	1	1	+	1	1	+
0<1.5	6	1	+	+	+	+

Lonely

VISIBILITY (NM) 3133

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	1	19	16
50<80	+	+	0	0	2	1
35<50	+	+	+	+	1	1
20<35	+	+	+	+	5	4
10<20	+	1	+	1	14	4
6<10	+	1	+	1	5	1
3<6	1	1	1	2	4	+
1.5<3	+	+	+	+	1	0
0<1.5	5	1	+	+	+	+

Oliktok

VISIBILITY (NM) 3150

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	1	15	22
50<80	0	+	0	+	2	1
35<50	0	+	0	0	1	1
20<35	+	+	0	+	5	3
10<20	+	+	+	2	18	5
6<10	+	+	+	1	4	+
3<6	+	1	1	1	3	+
1.5<3	+	+	+	+	+	+
0<1.5	6	2	1	1	+	0

Barter

VISIBILITY (NM) [illegible]

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	[illegible]	[illegible]	[illegible]	[illegible]	3	35
50<80	+	+	+	+	+	3
35<50	+	+	+	+	+	1
20<35	+	+	+	+	[illegible]	3
10<20	+	+	1	1	3	4
6<10	+	1	[illegible]	2	6	5
3<6	1	2	2	3	5	2
1.5<3	+	+	+	+	+	+
0<1.5	7	2	+	+	+	+

Tuktoyaktuk

VISIBILITY (NM) 2838

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	3	60
50<80	+	+	0	0	1	3
35<50	+	0	0	+	+	1
20<35	0	0	+	+	2	4
10<20	+	+	+	1	5	6
6<10	+	+	+	1	2	2
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	3	1	+	+	0	+

Cape Parry

VISIBILITY (NM) 15970

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	1	1	4	62
50<80	+	+	+	+	+	1
35<50	+	0	+	+	+	1
20<35	+	+	+	+	+	1
10<20	+	+	+	+	1	4
6<10	+	+	+	+	1	2
3<6	+	1	1	2	4	2
1.5<3	1	1	1	1	1	+
0<1.5	4	1	+	+	+	+

Clinton Point

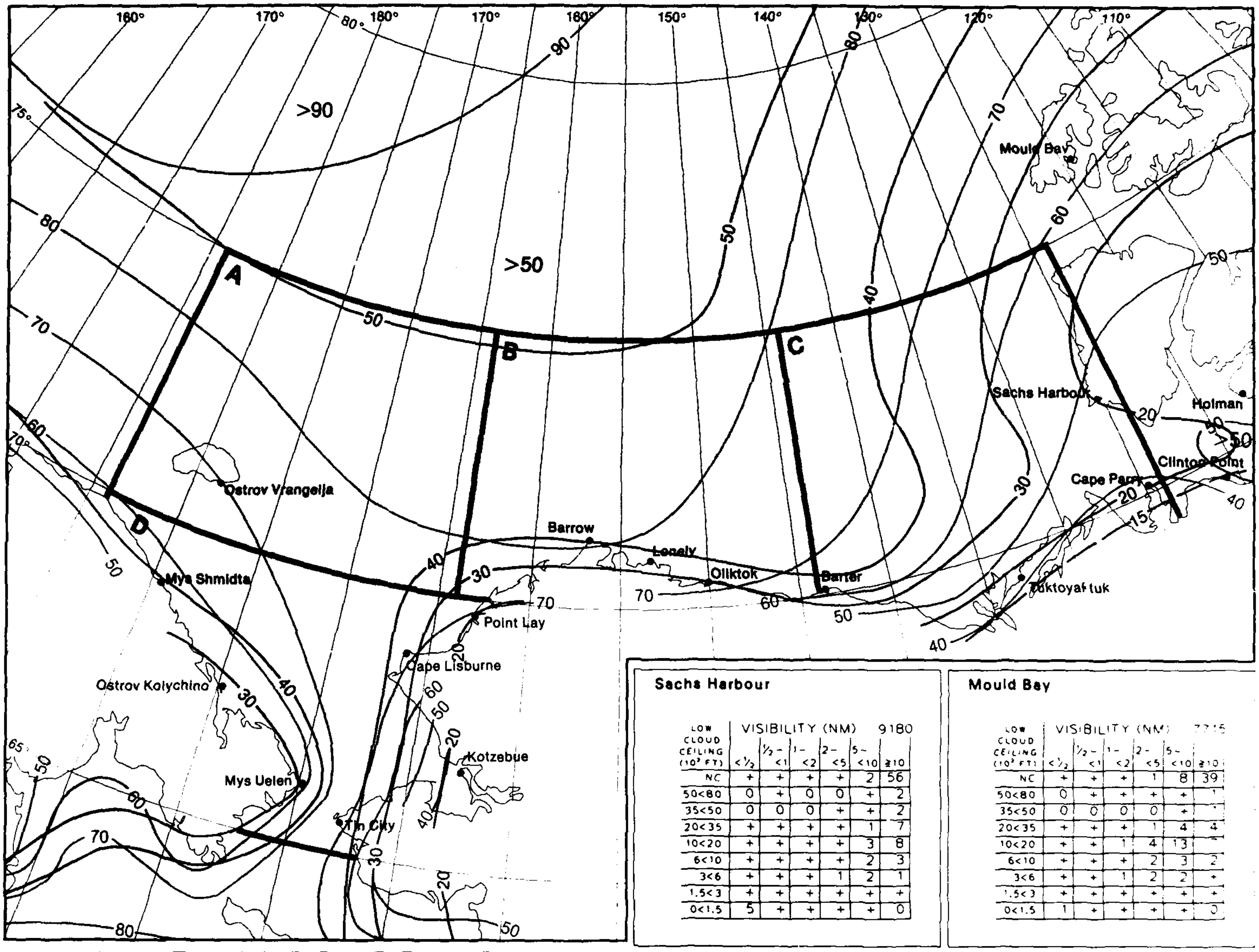
VISIBILITY (NM) 3796

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	+	+	1	59
50<80	+	+	0	+	+	3
35<50	0	0	0	0	0	3
20<35	+	+	0	+	1	7
10<20	+	+	+	1	3	8
6<10	+	+	+	1	2	3
3<6	+	1	1	+	2	2
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	+

Holman

VISIBILITY (NM) 2[illegible]

LOW CLOUD CEILING (10^2 FT)	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	2	56
50<80	+	0	0	+	0	2
35<50	+	+	0	0	+	2
20<35	+	+	0	+	2	7
10<20	+	+	+	1	5	7
6<10	+	+	+	1	1	1
3<6	1	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	7	+	+	+	+	+



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9180 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	2	56
50<80	0	+	0	0	+	2
35<50	0	0	0	+	+	2
20<35	+	+	+	+	1	7
10<20	+	+	+	+	3	8
6<10	+	+	+	+	2	3
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	5	+	+	+	+	0

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) [illegible] <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	8	39
50<80	0	+	+	+	+	[illegible]
35<50	0	0	0	0	+	[illegible]
20<35	+	+	+	1	4	4
10<20	+	+	1	4	13	[illegible]
6<10	+	+	+	2	3	2
3<6	+	+	1	2	2	+
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 90 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	0	0	1	2	33
50<80	0	1	0	1	1	1
35<50	0	0	0	0	0	1
20<35	0	0	0	1	2	4
10<20	0	0	1	4	2	4
6<10	0	0	1	0	10	1
3<6	0	1	1	1	3	1
1.5<3	0	1	0	0	0	0
0<1.5	13	0	0	2	0	0

Marine Area B

No Data Available

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 401 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	1	3	60
50<80	0	0	0	0	0	12
35<50	0	0	0	0	1	2
20<35	0	0	0	+	3	3
10<20	0	0	+	+	2	2
6<10	0	0	0	+	1	+
3<6	+	+	+	+	1	+
1.5<3	0	0	0	+	+	0
0<1.5	1	0	0	0	+	0

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 470 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	0	+	1	7	35
50<80	+	0	0	+	+	1
35<50	0	0	0	0	1	3
20<35	+	0	0	+	4	4
10<20	+	0	0	1	7	4
6<10	+	0	+	2	4	1
3<6	+	+	+	1	1	+
1.5<3	+	0	0	+	+	1
0<1.5	12	2	1	+	1	0

4 Ceiling and Visibility (mid range) **June**

Ostrov Vrangelja

VISIBILITY (NM) 4217

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	+	+	1	2	40
50<80	+	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	0	+	+	+	+	6
10<20	+	+	+	2	2	9
6<10	+	+	1	3	2	5
3<6	+	1	1	3	1	1
1.5<3	+	+	+	+	+	+
0<1.5	13	+	+	+	0	+

Mys Shmidta

VISIBILITY (NM) 4489

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	2	1	1	2	2	43
50<80	+	+	0	+	0	1
35<50	+	0	+	+	+	2
20<35	+	+	+	+	1	4
10<20	0	+	+	1	1	3
6<10	+	+	+	1	1	3
3<6	+	2	2	4	3	4
1.5<3	+	1	1	1	1	+
0<1.5	11	+	+	+	+	+

Ostrov Kolychino

VISIBILITY (NM) 2581

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	+	1	2	2	46
50<80	+	0	0	+	+	1
35<50	+	0	0	0	+	1
20<35	0	+	+	1	1	11
10<20	0	0	+	1	2	7
6<10	+	+	+	+	1	2
3<6	+	0	+	1	1	1
1.5<3	0	0	+	+	+	+
0<1.5	14	+	+	+	0	+

Mys Uelen

VISIBILITY (NM) 4484

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	3	+	+	1	4	41
50<80	0	0	0	+	+	+
35<50	+	0	0	+	+	1
20<35	+	0	0	+	1	6
10<20	+	+	+	3	6	10
6<10	+	+	1	2	2	3
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	9	+	+	+	+	+

Tin City

VISIBILITY (NM) 4758

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	+	+	1	2	18
50<80	0	0	0	+	+	1
35<50	+	+	+	+	+	2
20<35	+	+	+	+	1	3
10<20	+	+	0	+	2	3
6<10	+	+	+	2	3	3
3<6	+	1	1	6	4	2
1.5<3	+	+	1	1	1	+
0<1.5	30	3	2	1	+	+

Kotzebue

VISIBILITY (NM) 15385

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	+	+	+	+	1	54
50<80	0	+	+	+	+	4
35<50	0	+	0	+	+	3
20<35	0	0	+	+	1	6
10<20	0	+	+	+	2	10
6<10	0	+	+	1	2	6
3<6	+	+	+	1	2	2
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	+

Cape Lisburne

VISIBILITY (NM) 4459

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	+	1	1	7	27
50<80	+	+	+	+	1	3
35<50	0	0	+	0	1	2
20<35	+	+	+	+	3	6
10<20	+	+	+	1	9	7
6<10	+	+	1	2	9	3
3<6	+	+	1	1	2	+
1.5<3	0	+	+	+	+	+
0<1.5	4	2	1	+	+	0

Point Lay

VISIBILITY (NM) 3075

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	+	+	+	+	6	29
50<80	0	0	+	+	1	3
35<50	0	0	0	+	+	1
20<35	0	+	+	+	4	9
10<20	+	1	1	3	13	14
6<10	+	+	1	1	3	[illegible]
3<6	+	+	+	1	1	+
1.5<3	+	0	+	+	+	+
0<1.5	3	1	+	+	+	+

Barrow

VISIBILITY (NM) 15590

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	1	+	1	24	13
50<80	+	+	+	+	3	1
35<50	+	+	+	+	3	1
20<35	+	+	+	+	4	1
10<20	+	+	+	1	5	1
6<10	+	+	1	2	8	1
3<6	1	2	2	4	9	+
1.5<3	1	1	+	1	+	+
0<1.5	6	1	+	+	+	0

Lonely

VISIBILITY (NM) 3094

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	1	+	1	21	17
50<80	+	+	0	+	2	2
35<50	+	0	0	+	1	1
20<35	+	+	0	+	6	4
10<20	+	+	+	1	11	5
6<10	1	+	+	1	4	1
3<6	1	1	+	1	2	+
1.5<3	+	+	+	+	1	0
0<1.5	8	1	+	+	+	0

Oliktok

VISIBILITY (NM) 3057

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	1	+	1	17	23
50<80	0	+	+	0	2	2
35<50	0	+	0	+	1	1
20<35	+	+	+	+	5	6
10<20	+	+	+	2	13	4
6<10	+	+	1	1	3	+
3<6	+	+	+	1	2	+
1.5<3	+	0	0	+	+	0
0<1.5	7	2	1	1	+	0

Barter

VISIBILITY (NM) 16563

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	1	+	1	4	44
50<80	+	+	+	+	1	4
35<50	+	+	+	+	1	2
20<35	+	+	+	+	2	3
10<20	+	+	+	1	2	2
6<10	+	+	+	1	3	2
3<6	1	1	1	2	4	2
1.5<3	1	+	+	+	+	+
0<1.5	10	1	+	+	+	+

Tuktoyaktuk

VISIBILITY (NM) 2967

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	+	+	+	+	2	60
50<80	0	0	0	0	+	4
35<50	0	+	0	0	+	2
20<35	0	+	+	+	1	5
10<20	+	+	+	1	4	7
6<10	+	+	+	1	2	3
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	0

Cape Parry

VISIBILITY (NM) 16901

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	1	1	1	6	65
50<80	+	0	+	+	+	2
35<50	+	+	0	+	+	2
20<35	+	+	+	+	+	2
10<20	+	+	+	+	1	2
6<10	+	+	+	+	1	1
3<6	+	1	1	1	2	1
1.5<3	+	1	1	1	+	+
0<1.5	4	1	+	+	+	+

Clinton Point

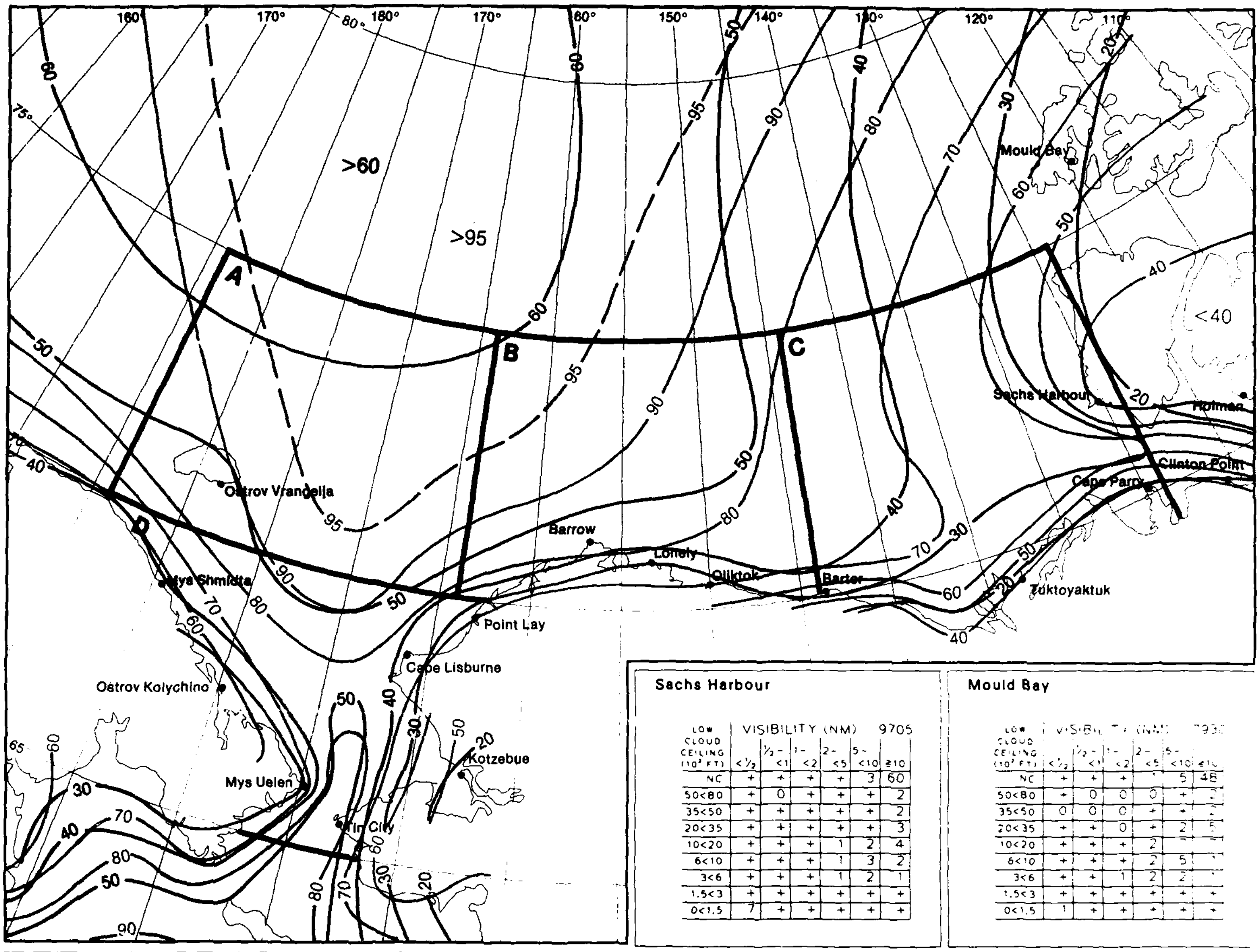
VISIBILITY (NM) 3740

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	+	+	+	+	2	67
50<80	0	+	+	+	+	2
35<50	+	+	0	0	+	2
20<35	+	+	+	+	1	7
10<20	+	+	+	1	2	3
6<10	+	+	+	+	1	1
3<6	1	1	+	1	2	1
1.5<3	+	+	0	+	+	0
0<1.5	1	+	+	+	+	0

Holman

VISIBILITY (NM) [illegible]

LOW CLOUD CEILING (10^2 FT)	<½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	+	+	+	3	61
50<80	+	0	+	0	+	4
35<50	+	+	0	+	+	2
20<35	+	+	+	+	2	9
10<20	+	+	+	1	3	5
6<10	+	+	+	1	1	1
3<6	+	+	+	1	+	+
1.5<3	0	0	0	+	+	0
0<1.5	4	+	+	+	+	0



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9705 <½	½–<1	1–<2	2–<5	5–<10	≥10
NC	+	+	+	+	3	60
50<80	+	0	+	+	+	2
35<50	+	+	+	+	+	2
20<35	+	+	+	+	+	3
10<20	+	+	+	1	2	4
6<10	+	+	+	1	3	2
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	7	+	+	+	+	+

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 793 <½	½–<1	1–<2	2–<5	5–<10	≥10
NC	+	+	+	[illegible]	5	48
50<80	+	0	0	0	+	[illegible]
35<50	0	0	0	+	+	[illegible]
20<35	+	+	0	+	2	5
10<20	+	+	+	2	[illegible]	[illegible]
6<10	+	+	+	2	5	[illegible]
3<6	+	+	1	2	2	[illegible]
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	+

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 340 <½	½–<1	1–<2	2–<5	5–<10	≥10
NC	2	1	1	2	21	12
50<80	0	0	+	0	2	2
35<50	0	0	0	+	1	2
20<35	+	0	1	1	4	4
10<20	0	0	+	2	2	5
6<10	1	1	+	1	2	1
3<6	1	1	1	2	2	+
1.5<3	0	1	+	0	+	0
0<1.5	18	2	2	+	0	0

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2761 <½	½–<1	1–<2	2–<5	5–<10	≥10
NC	4	2	1	2	15	25
50<80	1	+	+	+	2	1
35<50	+	0	+	+	1	1
20<35	0	+	+	+	3	2
10<20	+	+	+	1	5	2
6<10	+	+	+	1	3	1
3<6	+	+	1	1	2	+
1.5<3	1	1	+	1	+	+
0<1.5	14	2	1	1	+	0

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2670 <½	½–<1	1–<2	2–<5	5–<10	≥10
NC	2	+	+	1	10	46
50<80	+	0	+	0	1	4
35<50	+	0	0	+	1	2
20<35	+	0	0	+	2	3
10<20	+	0	+	1	3	4
6<10	0	+	+	1	2	3
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	1	+
0<1.5	5	+	+	+	+	+

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 232 <½	½–<1	1–<2	2–<5	5–<10	≥10
NC	1	+	+	1	[illegible]	26
50<80	+	+	0	+	1	2
35<50	+	0	0	+	1	2
20<35	+	+	+	1	3	6
10<20	1	+	1	1	6	5
6<10	+	+	1	1	5	3
3<6	+	+	+	1	1	2
1.5<3	+	+	+	+	1	+
0<1.5	14	2	1	1	+	+

4 Ceiling and Visibility (mid range)

Ostrov Vrangelja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4238 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	2	28
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	2
20<35	0	+	+	1	1	10
10<20	+	+	1	3	3	11
6<10	+	+	1	3	2	4
3<6	+	+	1	3	1	1
1.5<3	0	+	0	+	0	+
0<1.5	15	+	0	+	+	+

Mys Shmidte

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4537 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	2	2	33
50<80	+	0	+	+	+	1
35<50	0	+	+	+	+	2
20<35	0	+	+	+	1	4
10<20	+	1	1	1	2	5
6<10	+	1	1	2	2	2
3<6	+	3	3	4	3	3
1.5<3	+	2	1	1	+	+
0<1.5	11	+	+	0	0	+

Ostrov Kolychino

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2543 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	4	30
50<80	0	0	+	+	1	2
35<50	0	0	0	+	+	1
20<35	+	+	+	1	4	8
10<20	+	+	+	3	5	7
6<10	0	+	1	2	3	1
3<6	+	+	1	2	1	1
1.5<3	0	+	+	+	+	+
0<1.5	19	+	+	0	+	0

Mys Uelen

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4518 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	+	+	1	4	30
50<80	0	+	0	+	+	+
35<50	0	0	+	+	+	1
20<35	+	+	0	1	1	7
10<20	+	+	+	3	7	13
6<10	+	+	1	3	3	3
3<6	0	+	1	3	2	1
1.5<3	+	+	+	+	+	+
0<1.5	11	+	+	+	+	+

Tin City

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4673 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	+	2	17
50<80	0	0	+	+	+	1
35<50	+	0	+	+	+	1
20<35	+	+	+	+	3	7
10<20	0	0	+	1	4	7
6<10	+	0	+	4	5	3
3<6	+	1	3	5	5	2
1.5<3	+	1	1	1	+	+
0<1.5	20	2	2	1	+	0

Kotzebue

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 15575 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	2	41
50<80	0	0	0	+	+	4
35<50	+	0	+	+	+	4
20<35	0	+	+	+	1	10
10<20	+	+	+	1	4	15
6<10	0	+	+	1	3	6
3<6	+	+	+	1	1	2
1.5<3	+	+	+	+	+	+
0<1.5	+	+	+	+	+	+

Cape Lisburne

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4651 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	3	18
50<80	0	0	0	+	+	2
35<50	0	+	+	+	+	1
20<35	+	+	+	+	4	7
10<20	+	1	1	4	13	13
6<10	+	1	1	3	10	3
3<6	+	+	1	2	3	+
1.5<3	0	+	0	+	+	0
0<1.5	2	1	1	+	0	0

Point Lay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3289 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	0	+	5	21
50<80	+	+	+	+	1	2
35<50	0	+	0	+	+	1
20<35	+	+	+	+	5	8
10<20	+	1	1	3	16	15
6<10	+	+	1	2	4	2
3<6	+	1	1	1	2	1
1.5<3	0	0	+	+	+	0
0<1.5	2	1	+	+	0	+

Barrow

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 15794 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	15	7
50<80	+	+	+	+	1	1
35<50	+	0	+	+	2	+
20<35	+	+	+	+	4	1
10<20	+	+	+	1	10	2
6<10	+	1	1	3	13	1
3<6	1	2	2	5	11	1
1.5<3	+	+	+	1	1	0
0<1.5	7	1	+	+	+	0

Lonely

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3336 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	11	11
50<80	+	+	0	0	2	2
35<50	0	0	0	+	1	1
20<35	0	+	+	+	6	4
10<20	+	+	1	2	16	7
6<10	+	+	+	2	7	1
3<6	1	1	1	2	5	+
1.5<3	+	+	+	+	1	+
0<1.5	11	1	+	+	+	0

Oliktok

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3301 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	11	13
50<80	+	0	0	+	2	1
35<50	0	0	0	+	1	1
20<35	+	+	+	+	7	5
10<20	+	+	+	2	18	5
6<10	+	+	1	2	5	1
3<6	+	1	1	2	3	+
1.5<3	+	+	+	+	+	+
0<1.5	10	3	1	1	+	+

Barter

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16325 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	1	5	29
50<80	+	+	+	+	1	4
35<50	+	+	+	+	1	2
20<35	+	+	+	+	2	2
10<20	+	+	+	1	4	2
6<10	+	+	1	1	5	2
3<6	2	2	2	3	5	2
1.5<3	1	+	+	+	+	+
0<1.5	14	2	+	+	+	+

Tuktoyaktuk

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2955 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	1	46
50<80	+	+	+	0	+	4
35<50	0	0	0	0	+	2
20<35	0	0	0	+	2	7
10<20	+	+	+	1	6	11
6<10	+	+	+	1	3	4
3<6	+	+	1	1	2	1
1.5<3	0	+	+	+	+	+
0<1.5	2	1	+	+	+	0

Cape Parry

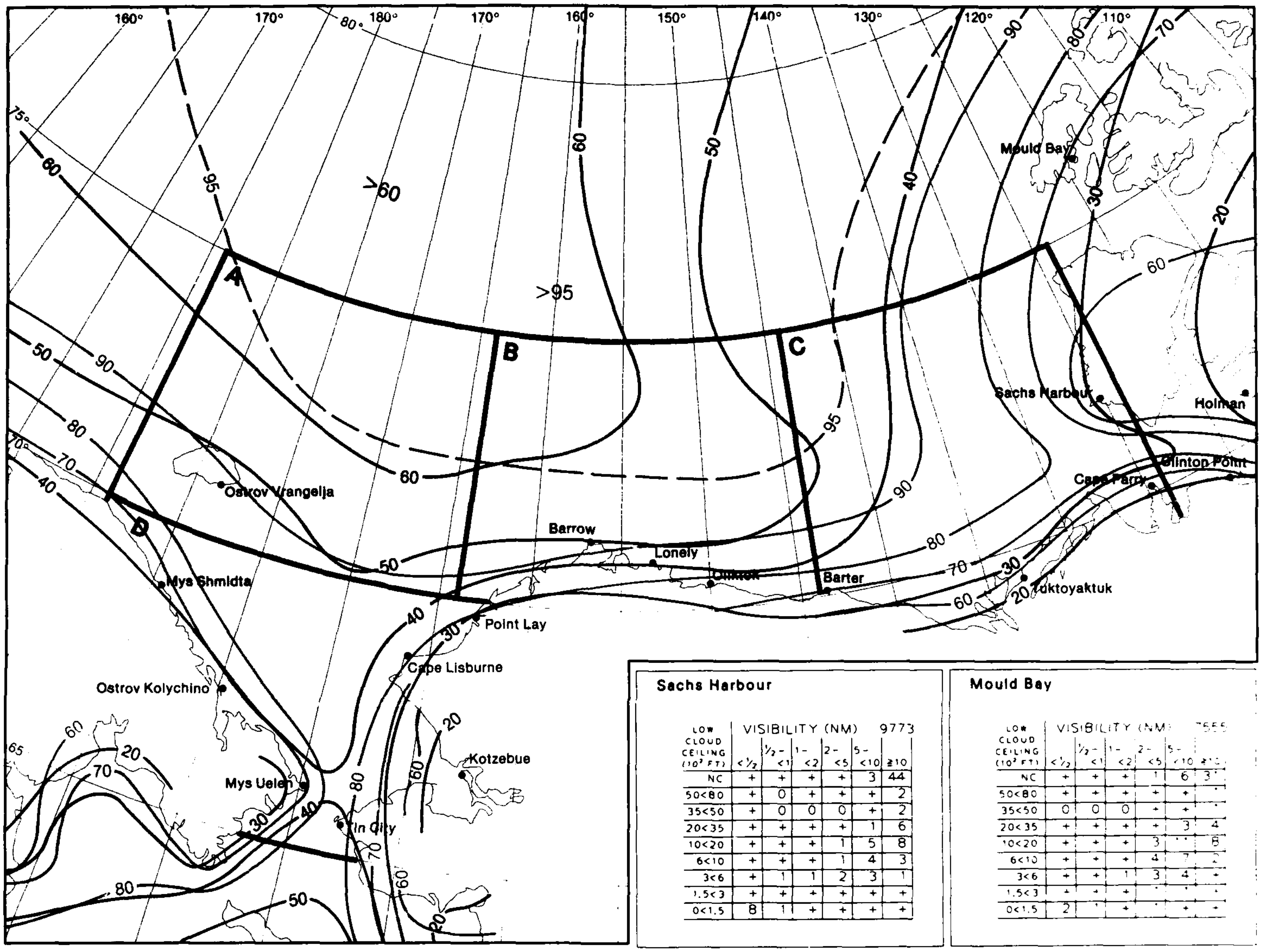
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16104 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	8	48
50<80	+	+	+	+	+	1
35<50	+	+	0	+	+	1
20<35	+	+	+	+	1	4
10<20	+	+	+	+	3	7
6<10	+	+	+	1	3	3
3<6	+	1	1	2	3	1
1.5<3	+	1	1	1	+	+
0<1.5	4	1	+	+	+	+

Clinton Point

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3777 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	3	52
50<80	+	+	+	+	+	2
35<50	0	0	+	+	+	3
20<35	+	0	+	+	1	9
10<20	+	+	+	2	5	10
6<10	+	+	+	1	2	2
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	+

Holman

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2868 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	+	3	47
50<80	+	+	0	+	1	3
35<50	0	0	0	0	+	2
20<35	+	+	0	+	2	10
10<20	+	+	+	1	6	9
6<10	+	+	+	1	1	1
3<6	+	+	+	1	1	+
1.5<3	+	+	0	+	+	0
0<1.5	6	+	+	+	+	0



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10 (9773)
NC	+	+	+	+	3	44
50<80	+	0	+	+	+	2
35<50	+	0	0	0	+	2
20<35	+	+	+	+	1	6
10<20	+	+	+	1	5	8
6<10	+	+	+	1	4	3
3<6	+	1	1	2	3	1
1.5<3	+	+	+	+	+	+
0<1.5	8	1	+	+	+	+

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10 ([illegible]555)
NC	+	+	+	1	6	[illegible]
50<80	+	+	+	+	+	[illegible]
35<50	0	0	0	+	+	[illegible]
20<35	+	+	+	+	3	4
10<20	+	+	+	3	[illegible]	8
6<10	+	+	+	4	7	[illegible]
3<6	+	+	1	3	4	+
1.5<3	+	+	+	[illegible]	[illegible]	+
0<1.5	2	[illegible]	+	[illegible]	+	+

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10 (524)
NC	1	+	1	1	6	18
50<80	0	+	0	+	1	1
35<50	0	0	0	+	1	2
20<35	+	+	+	1	3	7
10<20	+	+	1	2	6	7
6<10	1	0	1	2	4	2
3<6	+	1	1	1	2	1
1.5<3	0	+	1	1	1	+
0<1.5	16	2	1	1	1	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10 (4090)
NC	2	1	1	1	10	14
50<80	+	0	+	+	1	1
35<50	+	+	+	+	1	1
20<35	+	+	+	+	6	4
10<20	+	+	1	3	11	5
6<10	+	+	1	3	7	2
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	1	+
0<1.5	10	3	1	1	+	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10 (5720)
NC	2	1	1	1	9	29
50<80	+	+	+	+	1	3
35<50	+	0	0	+	1	1
20<35	+	+	+	+	3	5
10<20	+	+	+	1	7	6
6<10	+	+	+	1	3	2
3<6	+	+	1	1	3	2
1.5<3	+	+	+	1	1	+
0<1.5	7	1	1	+	+	+

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10 (1949)
NC	1	+	+	1	6	23
50<80	+	0	+	+	+	[illegible]
35<50	+	0	+	+	[illegible]	[illegible]
20<35	0	+	+	1	4	[illegible]
10<20	+	+	+	2	[illegible]	[illegible]
6<10	0	+	+	1	4	5
3<6	+	+	+	1	2	2
1.5<3	+	0	+	+	+	+
0<1.5	9	2	1	1	+	+

Ostrov Vrangelja

VISIBILITY (NM) 4048

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	1	2	2	24
50<80	0	0	+	+	+	1
35<50	0	0	+	+	+	3
20<35	+	+	+	2	2	15
10<20	+	1	1	7	6	13
6<10	+	+	1	3	2	3
3<6	+	+	+	2	1	+
1.5<3	0	0	0	+	+	+
0<1.5	6	+	0	+	+	+

Mys Shmidta

VISIBILITY (NM) 4299

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	1	1	3	27
50<80	0	0	0	+	+	1
35<50	0	+	+	+	+	3
20<35	+	+	1	1	2	6
10<20	1	1	2	2	3	8
6<10	+	1	1	2	2	3
3<6	1	4	3	4	3	3
1.5<3	+	1	1	+	+	+
0<1.5	5	+	+	+	0	+

Ostrov Kolychino

VISIBILITY (NM) 2424

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	9	15
50<80	0	+	+	+	1	1
35<50	0	0	0	+	+	1
20<35	+	0	+	1	8	10
10<20	+	+	1	4	11	11
6<10	+	+	1	2	3	2
3<6	0	+	+	2	1	+
1.5<3	+	0	0	+	+	+
0<1.5	12	+	+	+	+	+

Mys Uelen

VISIBILITY (NM) 4331

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	2	26
50<80	0	0	0	0	0	+
35<50	0	0	0	+	+	1
20<35	+	+	+	1	2	15
10<20	+	+	1	5	7	15
6<10	0	+	1	3	3	2
3<6	+	+	1	2	2	1
1.5<3	0	+	+	+	+	+
0<1.5	7	+	+	+	+	+

Tin City

VISIBILITY (NM) 4364

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	3	17
50<80	+	+	0	0	+	1
35<50	+	+	0	+	1	2
20<35	+	+	+	1	4	12
10<20	+	+	+	2	7	9
6<10	0	+	1	4	7	4
3<6	+	+	2	4	3	2
1.5<3	+	+	1	1	+	+
0<1.5	8	1	2	+	+	0

Kotzebue

VISIBILITY (NM) 15249

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	2	50
50<80	+	0	0	+	+	5
35<50	+	0	+	+	1	5
20<35	+	+	+	+	2	10
10<20	+	+	+	1	4	11
6<10	0	+	+	1	3	2
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	+	+	+	+	+	0

Cape Lisburne

VISIBILITY (NM) 4634

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	5	12
50<80	0	0	0	+	1	1
35<50	+	0	0	+	1	3
20<35	0	+	+	1	11	12
10<20	+	+	+	3	18	9
6<10	0	1	1	3	8	2
3<6	0	+	+	1	1	+
1.5<3	0	0	+	+	0	0
0<1.5	1	1	1	1	+	0

Point Lay

VISIBILITY (NM) 3234

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	7	18
50<80	0	0	+	+	1	+
35<50	0	0	0	0	1	1
20<35	+	+	0	+	5	5
10<20	+	1	1	4	22	14
6<10	+	+	1	2	5	2
3<6	+	1	1	1	2	+
1.5<3	+	0	0	+	+	0
0<1.5	2	+	+	+	0	0

Barrow

VISIBILITY (NM) 15300

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	10	5
50<80	+	0	0	+	1	+
35<50	+	+	+	+	1	+
20<35	+	+	+	+	6	1
10<20	+	+	1	2	19	2
6<10	+	1	1	4	17	1
3<6	+	1	2	5	8	+
1.5<3	+	+	+	+	+	0
0<1.5	4	1	1	+	+	0

Lonely

VISIBILITY (NM) 3264

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	+	9	7
50<80	+	+	+	+	1	+
35<50	+	0	+	0	1	+
20<35	+	+	0	+	6	3
10<20	+	+	1	2	24	9
6<10	+	1	1	2	10	1
3<6	1	1	1	2	5	+
1.5<3	+	+	+	+	1	0
0<1.5	6	1	+	+	+	+

Oliktok

VISIBILITY (NM) 3240

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	10	8
50<80	0	+	+	+	2	1
35<50	0	0	0	0	1	+
20<35	+	+	+	+	8	4
10<20	+	+	1	3	24	7
6<10	+	1	1	2	6	+
3<6	+	1	1	1	2	+
1.5<3	+	+	+	+	+	0
0<1.5	7	3	1	1	+	0

Barter

VISIBILITY (NM) 15663

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	1	4	24
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	1
20<35	+	+	+	+	3	4
10<20	+	1	1	2	9	6
6<10	+	1	1	2	5	2
3<6	1	2	2	2	4	1
1.5<3	1	+	+	+	+	+
0<1.5	10	2	1	+	0	0

Tuktoyaktuk

VISIBILITY (NM) 2824

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	2	36
50<80	0	0	+	0	1	3
35<50	0	0	0	0	+	2
20<35	+	0	+	+	3	8
10<20	+	+	+	1	10	12
6<10	+	+	+	1	5	3
3<6	+	+	+	1	3	1
1.5<3	0	+	+	+	+	0
0<1.5	3	1	+	+	0	0

Cape Parry

VISIBILITY (NM) 14984

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	8	35
50<80	+	+	0	+	+	1
35<50	+	+	+	+	+	1
20<35	+	+	+	+	2	6
10<20	+	+	+	1	6	10
6<10	+	+	+	1	4	3
3<6	+	1	1	2	3	1
1.5<3	+	1	+	1	+	+
0<1.5	3	1	+	+	+	0

Clinton Point

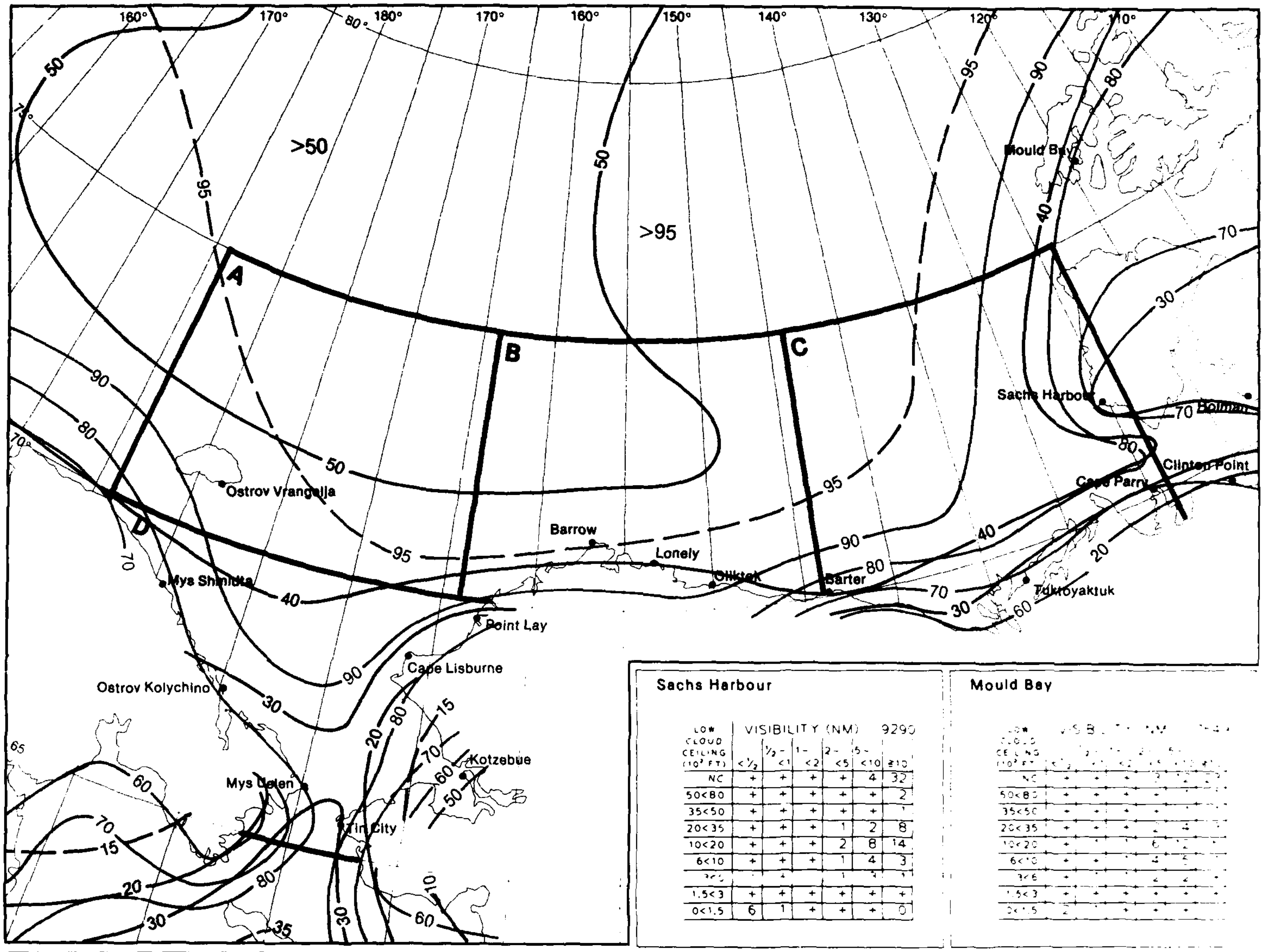
VISIBILITY (NM) 3663

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	2	38
50<80	+	+	+	+	+	2
35<50	+	0	0	+	1	2
20<35	+	+	+	1	2	16
10<20	1	+	+	1	6	12
6<10	+	1	+	1	3	2
3<6	+	1	+	1	1	1
1.5<3	+	+	0	+	+	0
0<1.5	1	+	+	+	0	0

Holman

VISIBILITY (NM) 2814

LOW CLOUD CEILING (10^2 FT)	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	3	33
50<80	+	0	0	+	1	3
35<50	+	+	+	0	1	3
20<35	+	+	+	1	3	14
10<20	1	1	1	3	7	10
6<10	+	+	+	1	2	1
3<6	+	+	+	+	1	+
1.5<3	+	0	0	0	+	0
0<1.5	7	1	+	+	+	0



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9290					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	+	4	32
50<80	+	+	+	+	+	2
35<50	+	+	+	+	+	1
20<35	+	+	+	1	2	8
10<20	+	+	+	2	8	14
6<10	+	+	+	1	4	3
3<6	[illegible]	+	[illegible]	1	[illegible]	[illegible]
1.5<3	+	+	+	+	+	+
0<1.5	6	1	+	+	+	0

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) [illegible]					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	[illegible]	[illegible]	[illegible]
50<80	+	+	+	+	[illegible]	[illegible]
35<50	+	+	+	+	[illegible]	[illegible]
20<35	+	+	+	[illegible]	4	[illegible]
10<20	+	[illegible]	[illegible]	6	[illegible]	[illegible]
6<10	+	+	[illegible]	4	5	[illegible]
3<6	+	[illegible]	[illegible]	2	2	+
1.5<3	+	+	+	+	+	+
0<1.5	2	[illegible]	+	+	+	[illegible]

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 585					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	+	1	3	10
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	+	+	0	1	10	9
10<20	0	0	1	4	7	11
6<10	1	1	1	2	9	4
3<6	+	+	0	1	4	3
1.5<3	0	0	+	1	2	1
0<1.5	7	1	1	1	1	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2215					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	1	10	8
50<80	+	+	0	0	1	+
35<50	0	0	+	+	1	1
20<35	+	+	+	1	9	3
10<20	+	+	1	3	17	6
6<10	+	1	1	3	7	2
3<6	+	+	1	[illegible]	2	1
1.5<3	+	+	+	+	+	0
0<1.5	8	3	2	1	1	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5040					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	1	1	9	23
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	1
20<35	+	+	+	1	4	4
10<20	+	+	+	2	10	6
6<10	+	+	+	1	5	2
3<6	+	1	1	2	5	1
1.5<3	+	+	+	1	1	+
0<1.5	6	1	1	1	+	+

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) [illegible]					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	0	+	[illegible]	8
50<80	0	0	0	+	[illegible]	[illegible]
35<50	+	0	+	+	[illegible]	2
20<35	0	+	+	[illegible]	8	[illegible]
10<20	+	+	+	[illegible]	[illegible]	2
6<10	+	+	+	[illegible]	5	4
3<6	+	+	+	[illegible]	2	[illegible]
1.5<3	0	0	+	+	[illegible]	+
0<1.5	4	2	[illegible]	1	[illegible]	+

4 Ceiling and Visibility (mid range) **Septembe**

Ostrov Vrangelja

VISIBILITY (NM) 4241

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	1	2	2	5	4	31
50<80	+	+	+	+	+	1
35<50	+	+	+	1	1	3
20<35	+	+	1	5	4	13
10<20	+	1	2	6	3	6
6<10	+	+	+	1	1	1
3<6	+	0	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	1	0	0	+	+	0

Mys Shmidta

VISIBILITY (NM) 4553

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	2	2	1	3	6	30
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	3
20<35	1	1	1	3	4	7
10<20	2	3	3	5	3	5
6<10	1	1	1	1	1	1
3<6	+	1	+	1	1	1
1.5<3	+	+	0	+	0	+
0<1.5	1	+	+	+	0	+

Ostrov Kolychino

VISIBILITY (NM) 2715

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	1	+	1	3	14	13
50<80	0	0	+	1	1	1
35<50	0	0	+	+	1	1
20<35	+	0	1	3	11	8
10<20	1	1	5	8	11	6
6<10	0	+	1	1	1	1
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	2	+	+	+	+	+

Mys Uelen

VISIBILITY (NM) 4515

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	1	2	21
50<80	0	0	0	+	+	+
35<50	0	0	+	+	+	2
20<35	+	+	1	3	4	20
10<20	+	1	4	11	8	14
6<10	+	+	1	1	1	1
3<6	0	+	+	+	1	+
1.5<3	0	+	0	+	0	0
0<1.5	1	0	0	0	0	+

Tin City

VISIBILITY (NM) 4455

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	1	4	16
50<80	+	0	0	+	+	1
35<50	0	0	+	+	1	3
20<35	+	+	1	3	12	13
10<20	+	+	2	4	8	5
6<10	+	+	1	3	4	1
3<6	+	+	1	1	1	+
1.5<3	0	+	+	+	+	0
0<1.5	7	1	2	+	0	0

Kotzebue

VISIBILITY (NM) 15696

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	1	3	51
50<80	0	+	+	+	+	4
35<50	+	0	+	+	1	5
20<35	+	+	+	1	3	9
10<20	+	+	1	2	4	5
6<10	+	+	+	1	2	1
3<6	+	+	+	+	1	+
1.5<3	0	+	+	+	+	0
0<1.5	1	1	1	1	+	+

Cape Lisburne

VISIBILITY (NM) 4512

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	+	7	13
50<80	0	0	+	0	1	1
35<50	0	+	+	+	2	2
20<35	+	+	+	2	17	10
10<20	1	1	2	5	18	5
6<10	+	+	+	1	3	1
3<6	+	0	+	+	+	+
1.5<3	0	0	0	+	+	0
0<1.5	1	1	1	1	+	0

Point Lay

VISIBILITY (NM) 3179

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	1	1	1	1	12	19
50<80	0	+	+	+	2	+
35<50	0	0	0	+	1	+
20<35	+	+	+	1	6	4
10<20	1	1	1	5	22	7
6<10	+	1	1	2	4	+
3<6	+	1	+	+	1	0
1.5<3	+	0	+	0	0	0
0<1.5	2	+	+	+	0	+

Barrow

VISIBILITY (NM) 15462

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	1	1	1	2	16	7
50<80	+	+	+	+	1	1
35<50	+	+	+	+	1	+
20<35	+	+	+	1	7	2
10<20	+	1	2	6	19	1
6<10	1	1	1	4	11	+
3<6	1	1	1	2	3	+
1.5<3	+	+	+	+	+	+
0<1.5	2	1	+	+	+	0

Lonely

VISIBILITY (NM) 3342

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	1	+	+	1	15	11
50<80	0	+	+	+	2	1
35<50	+	0	+	+	1	+
20<35	+	+	+	1	5	2
10<20	+	1	1	4	24	5
6<10	1	1	1	3	7	+
3<6	1	1	1	1	3	+
1.5<3	+	0	+	+	+	0
0<1.5	2	1	+	+	+	+

Oliktok

VISIBILITY (NM) 3346

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	1	+	1	16	11
50<80	+	+	+	+	2	1
35<50	0	+	+	+	1	+
20<35	+	+	+	1	8	2
10<20	1	2	2	6	24	4
6<10	+	1	1	3	4	+
3<6	+	1	1	1	1	+
1.5<3	0	0	0	+	+	0
0<1.5	2	1	+	+	0	0

Barter

VISIBILITY (NM) 15954

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	1	+	1	2	7	22
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	1
20<35	+	+	1	2	5	3
10<20	1	2	2	6	12	4
6<10	+	1	1	3	5	1
3<6	+	1	1	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	4	2	1	+	+	0

Tuktoyaktuk

VISIBILITY (NM) 2953

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	+	6	29
50<80	0	0	+	+	1	2
35<50	0	0	+	+	1	1
20<35	+	+	+	1	5	8
10<20	+	1	1	4	13	11
6<10	+	+	1	1	4	2
3<6	+	+	+	1	1	+
1.5<3	+	0	+	+	+	+
0<1.5	1	1	1	+	+	0

Cape Parry

VISIBILITY (NM) 16199

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	2	9	25
50<80	+	+	+	+	1	1
35<50	+	+	+	+	1	1
20<35	+	+	+	2	5	5
10<20	1	2	1	4	11	10
6<10	+	1	1	2	4	2
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	1	+	+	+	0

Clinton Point

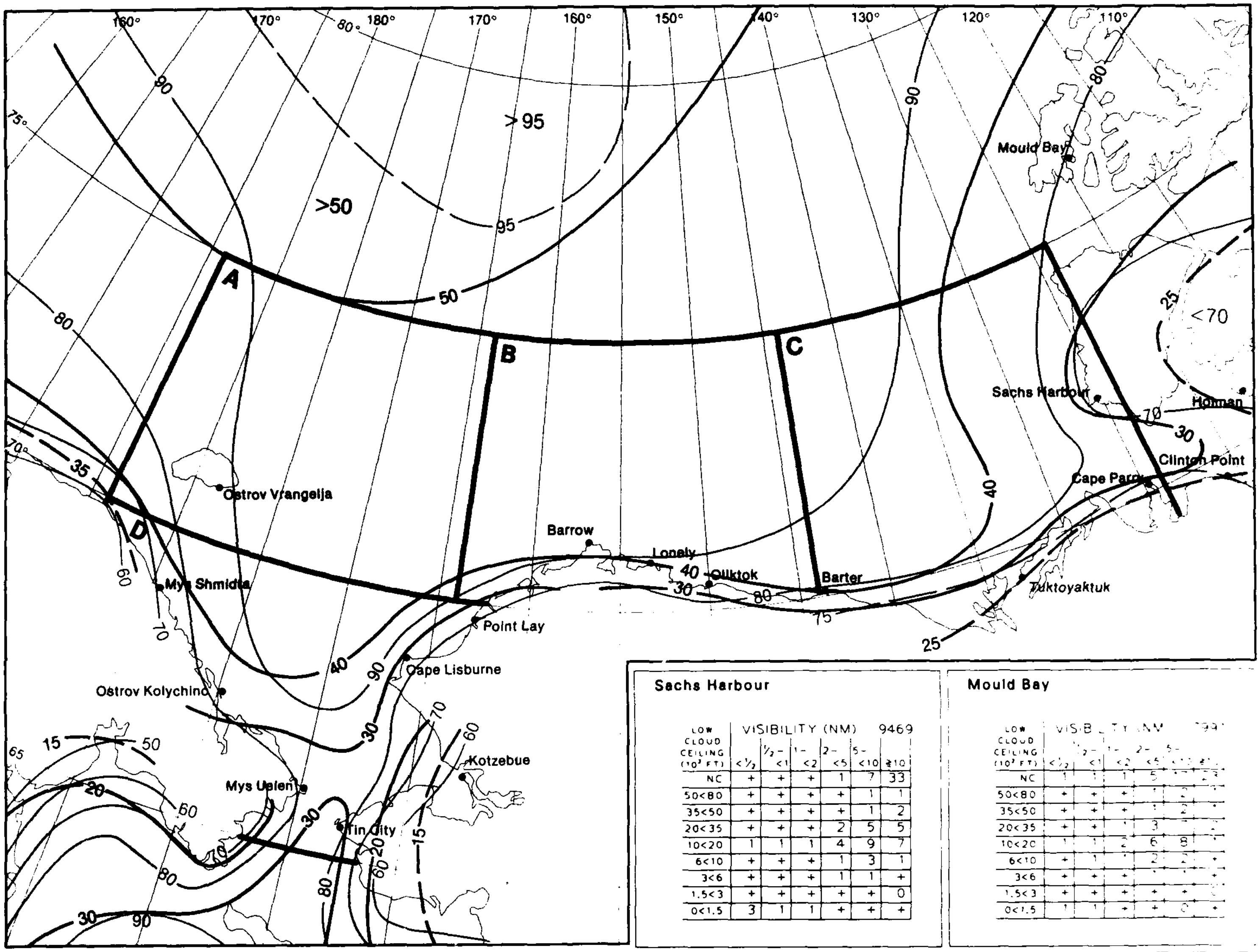
VISIBILITY (NM) 3754

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	1	3	28
50<80	+	+	0	+	1	2
35<50	+	+	+	+	1	3
20<35	1	+	+	1	6	13
10<20	2	1	1	3	9	12
6<10	1	+	+	1	2	2
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	0	0
0<1.5	+	+	+	0	0	0

Holman

VISIBILITY (NM) 3012

LOW CLOUD CEILING (10^2 FT)	< ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥10
NC	+	+	+	1	3	34
50<80	+	+	+	+	1	+
35<50	+	+	+	+	1	3
20<35	+	+	+	1	5	10
10<20	1	1	1	4	10	[illegible]
6<10	+	1	1	1	1	1
3<6	+	+	+	+	+	+
1.5<3	+	+	+	0	0	0
0<1.5	3	+	+	+	+	+



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9469 < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10
NC	+	+	+	1	7	33
50<80	+	+	+	+	1	1
35<50	+	+	+	+	1	2
20<35	+	+	+	2	5	5
10<20	1	1	1	4	9	7
6<10	+	+	+	1	3	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	3	1	1	+	+	+

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) [illegible] < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10
NC	1	1	1	5	[illegible]	[illegible]
50<80	+	+	+	[illegible]	2	[illegible]
35<50	+	+	+	[illegible]	2	[illegible]
20<35	+	+	[illegible]	3	[illegible]	[illegible]
10<20	1	1	2	6	8	[illegible]
6<10	+	1	[illegible]	2	2	+
3<6	+	+	+	[illegible]	[illegible]	+
1.5<3	+	+	+	+	+	[illegible]
0<1.5	1	1	+	+	0	+

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 178 < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10
NC	8	1	1	1	18	11
50<80	0	0	1	1	3	0
35<50	0	0	0	0	0	1
20<35	0	0	1	3	5	2
10<20	1	1	1	2	4	3
6<10	1	1	0	1	3	4
3<6	0	0	0	0	1	1
1.5<3	0	0	0	1	0	1
0<1.5	12	6	0	1	1	0

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 810 < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10
NC	1	+	1	2	21	17
50<80	0	0	+	+	2	1
35<50	0	+	+	+	2	+
20<35	+	+	+	2	9	3
10<20	+	+	2	4	8	3
6<10	+	1	1	2	4	2
3<6	0	+	1	+	1	+
1.5<3	0	0	+	0	+	+
0<1.5	4	2	1	1	1	0

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2463 < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10
NC	1	1	1	1	12	18
50<80	0	0	0	+	1	1
35<50	0	0	0	+	1	+
20<35	0	0	+	1	3	3
10<20	+	+	1	3	9	10
6<10	+	+	1	2	5	3
3<6	+	1	1	3	6	2
1.5<3	+	+	+	1	1	1
0<1.5	2	1	1	1	1	+

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) [illegible] < ½	½ - < 1	1 - < 2	2 - < 5	5 - < 10	≥ 10
NC	0	0	+	+	[illegible]	[illegible]
50<80	+	0	0	+	+	1
35<50	0	0	+	+	[illegible]	[illegible]
20<35	0	+	2	2	9	6
10<20	1	1	1	2	8	9
6<10	+	+	1	2	4	4
3<6	0	0	+	1	2	+
1.5<3	0	0	+	+	+	+
0<1.5	2	1	3	3	3	1

4 Ceiling and Visibility (mid range)

Ostrov Vrangelja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4116 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	3	3	4	9	6	34
50<80	+	+	+	+	+	+
35<50	+	+	+	1	+	1
20<35	1	1	2	4	3	4
10<20	1	1	2	6	2	4
6<10	+	+	+	1	1	1
3<6	0	0	+	+	+	+
1.5<3	+	0	0	0	0	0
0<1.5	1	+	+	+	0	+

Mys Shmidta

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4341 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	6	4	3	6	8	29
50<80	+	+	+	+	+	+
35<50	+	+	+	1	1	1
20<35	1	1	1	3	3	2
10<20	4	3	3	5	3	2
6<10	1	1	1	1	+	+
3<6	+	1	1	+	+	+
1.5<3	+	+	+	+	+	0
0<1.5	2	+	0	0	+	+

Ostrov Kolychino

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2577 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	2	5	30	15
50<80	+	+	1	2	2	+
35<50	0	+	0	+	1	+
20<35	+	+	1	3	9	4
10<20	+	1	4	4	7	2
6<10	+	+	+	1	1	+
3<6	+	0	0	+	+	0
1.5<3	0	0	0	0	+	0
0<1.5	1	+	+	0	+	0

Mys Uelen

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4324 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	1	2	2	28
50<80	0	0	+	+	+	+
35<50	0	+	+	+	+	1
20<35	+	+	2	3	3	10
10<20	1	2	6	12	7	12
6<10	+	+	1	2	1	+
3<6	0	+	+	1	+	+
1.5<3	0	0	0	0	+	+
0<1.5	+	0	+	0	+	+

Tin City

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4091 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	1	2	11	17
50<80	0	+	+	+	1	1
35<50	+	0	+	+	2	1
20<35	1	1	3	5	10	4
10<20	+	1	2	5	6	3
6<10	+	+	+	2	1	+
3<6	+	+	+	1	+	+
1.5<3	+	+	0	+	+	0
0<1.5	7	2	1	+	0	0

Kotzebue

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 15455 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	5	48
50<80	+	+	+	+	1	3
35<50	+	+	+	+	2	4
20<35	+	+	1	2	5	7
10<20	+	+	1	2	4	3
6<10	+	+	+	+	1	1
3<6	0	+	+	+	+	+
1.5<3	0	0	0	0	0	+
0<1.5	2	1	1	1	+	0

Cape Lisburne

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4138 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	1	+	1	13	17
50<80	0	0	0	+	1	1
35<50	0	+	+	+	1	+
20<35	+	+	+	2	11	4
10<20	+	1	2	6	21	3
6<10	+	+	+	1	3	+
3<6	+	0	0	+	+	+
1.5<3	0	0	0	0	+	0
0<1.5	2	2	1	1	+	0

Point Lay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 323[illegible] <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	3	1	1	3	23	18
50<80	+	+	+	+	2	1
35<50	+	+	+	+	1	+
20<35	+	+	+	1	5	2
10<20	2	2	1	4	15	4
6<10	+	+	+	+	2	+
3<6	+	+	+	+	+	0
1.5<3	+	0	0	0	+	0
0<1.5	3	+	+	+	+	0

Barrow

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14740 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	2	4	28	9
50<80	+	+	+	1	2	+
35<50	+	+	+	+	1	+
20<35	+	+	+	2	6	1
10<20	2	1	2	5	11	+
6<10	+	1	1	2	6	+
3<6	+	+	+	1	2	+
1.5<3	+	+	+	+	+	+
0<1.5	2	+	+	+	+	+

Lonely

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3235 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	3	32	15
50<80	+	+	+	+	2	+
35<50	+	+	0	+	1	+
20<35	+	+	+	1	5	1
10<20	1	1	2	3	13	3
6<10	1	1	+	1	2	+
3<6	1	+	+	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	1	+	+	+	0

Oliktok

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3219 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	2	1	3	29	16
50<80	0	+	+	+	2	1
35<50	0	+	+	+	1	+
20<35	+	+	+	1	5	1
10<20	1	1	2	5	14	2
6<10	+	1	1	1	1	+
3<6	+	+	+	+	+	+
1.5<3	+	0	0	+	+	0
0<1.5	2	+	+	+	0	0

Barter

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) [illegible] <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	1	2	2	14	26
50<80	+	+	+	+	2	1
35<50	+	+	+	+	1	1
20<35	+	+	1	1	5	1
10<20	1	2	2	5	10	2
6<10	1	1	1	1	4	1
3<6	+	+	+	+	+	+
1.5<3	+	0	+	0	+	+
0<1.5	4	1	+	+	+	0

Tuktoyaktuk

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2956 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	10	48
50<80	0	+	+	+	2	2
35<50	0	+	+	+	1	1
20<35	+	+	1	1	5	3
10<20	+	+	1	3	8	3
6<10	+	+	1	1	2	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	1	+	+	+	0	0

Cape Parry

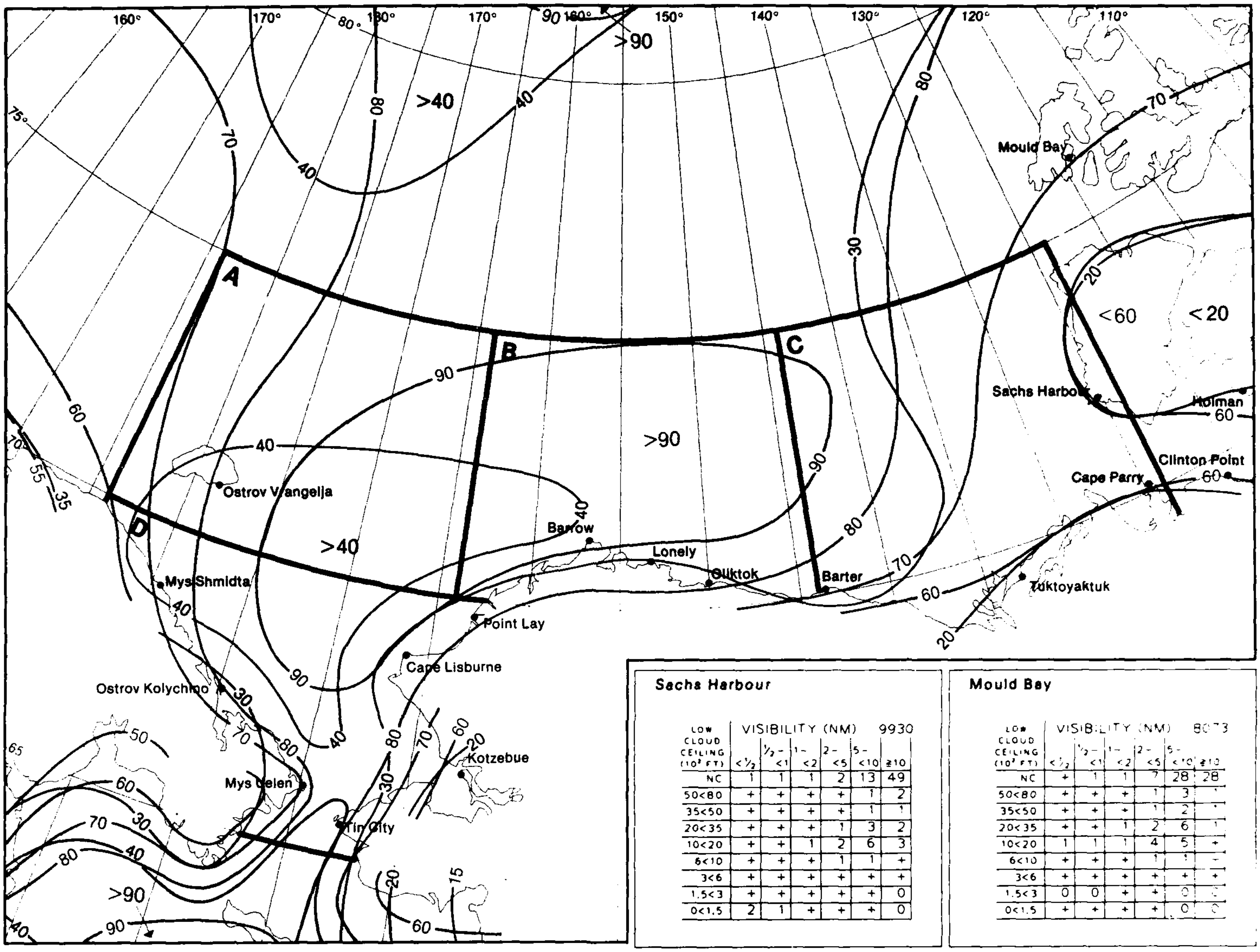
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 17038 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	4	20	38
50<80	+	+	+	+	1	1
35<50	+	+	+	+	1	+
20<35	+	+	1	1	3	1
10<20	1	1	1	3	7	2
6<10	+	+	1	1	2	1
3<6	+	+	+	+	1	+
1.5<3	+	+	+	+	+	0
0<1.5	1	1	+	+	+	0

Clinton Point

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3757 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	7	45
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	1
20<35	1	+	+	1	4	4
10<20	2	2	1	3	8	6
6<10	1	+	1	1	2	1
3<6	+	+	+	+	1	+
1.5<3	0	0	0	+	0	+
0<1.5	1	+	0	+	0	0

Holman

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 289[illegible] <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	7	46
50<80	+	0	+	+	1	3
35<50	+	+	+	+	1	1
20<35	1	+	+	1	4	5
10<20	1	1	1	4	8	2
6<10	+	+	1	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	+	0
0<1.5	2	+	+	+	0	0



Sachs Harbour

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (9930)
NC	1	1	1	2	13	49
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	1
20<35	+	+	+	1	3	2
10<20	+	+	1	2	6	3
6<10	+	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	+	0
0<1.5	2	1	+	+	+	0

Mould Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (8073)
NC	+	1	1	7	28	28
50<80	+	+	+	1	3	1
35<50	+	+	+	1	2	[illegible]
20<35	+	+	1	2	6	1
10<20	1	1	1	4	5	+
6<10	+	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	0	0
0<1.5	+	+	+	+	0	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (15)
NC	0	0	0	0	33	20
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	7
10<20	0	0	0	7	13	7
6<10	0	0	0	0	7	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	7	0

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (435)
NC	1	+	1	8	54	6
50<80	+	+	1	3	8	+
35<50	0	0	0	+	1	0
20<35	0	0	0	+	4	+
10<20	0	+	+	+	2	+
6<10	0	0	0	1	1	+
3<6	0	0	0	+	+	0
1.5<3	0	0	0	+	0	0
0<1.5	4	1	+	1	0	0

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (1292)
NC	1	1	1	2	16	51
50<80	0	0	+	+	2	2
35<50	0	0	+	+	+	1
20<35	0	+	+	+	3	2
10<20	0	+	+	1	4	2
6<10	0	+	+	+	1	+
3<6	0	+	+	+	1	1
1.5<3	0	0	+	+	+	+
0<1.5	1	1	1	+	+	+

Marine Area D

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½–<1	1–<2	2–<5	5–<10	≥10 (86)
NC	0	0	0	1	17	9
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	3	5
10<20	0	1	0	3	10	7
6<10	1	0	0	6	12	1
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	2	0	5	8	1	6

4 Ceiling and Visibility (mid range) **November**

Ostrov Vrangelja

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4170 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	2	4	11	9	50
50<80	0	+	+	+	+	+
35<50	+	+	+	+	+	1
20<35	+	+	1	3	2	2
10<20	+	1	1	3	1	2
6<10	+	+	+	1	+	+
3<6	+	0	+	+	+	+
1.5<3	0	+	+	0	0	0
0<1.5	1	+	+	0	0	+

Mys Shmidta

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4420 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	5	5	5	7	15	39
50<80	+	+	+	+	+	+
35<50	+	+	+	1	1	1
20<35	1	1	1	2	1	1
10<20	2	1	2	2	1	1
6<10	+	+	+	1	+	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	0	+
0<1.5	1	+	0	0	+	0

Ostrov Kolychino

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 2566 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	2	4	47	22
50<80	0	+	2	3	3	+
35<50	0	0	0	+	+	+
20<35	+	+	+	1	3	2
10<20	0	+	1	2	2	1
6<10	0	+	0	+	+	+
3<6	+	0	0	+	+	+
1.5<3	0	0	0	0	0	+
0<1.5	1	+	1	+	0	0

Mys Uelen

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4445 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	1	2	5	6	50
50<80	0	+	+	+	+	+
35<50	0	+	+	+	+	1
20<35	+	+	1	2	2	4
10<20	1	1	3	8	4	5
6<10	+	+	+	1	+	1
3<6	+	+	+	+	+	+
1.5<3	0	+	0	+	+	0
0<1.5	+	+	0	0	+	+

Tin City

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4007 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	5	5	5	8	17	14
50<80	+	+	0	+	+	+
35<50	1	+	+	+	1	+
20<35	3	1	1	2	5	1
10<20	2	2	2	3	3	+
6<10	1	1	2	1	1	+
3<6	+	+	+	1	+	+
1.5<3	+	0	+	+	0	0
0<1.5	9	1	+	+	0	0

Kotzebue

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 15507 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	1	2	9	53
50<80	+	+	+	+	1	3
35<50	+	+	+	+	2	2
20<35	+	+	+	1	4	3
10<20	+	+	1	2	4	2
6<10	+	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	+	+
0<1.5	3	1	1	1	+	0

Cape Lisburne

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4227 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	2	17	30
50<80	0	+	+	+	1	1
35<50	+	+	+	+	1	+
20<35	+	+	1	2	8	4
10<20	+	1	1	4	13	3
6<10	0	+	+	1	2	+
3<6	0	+	0	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	1	1	+	+	+	0

Point Lay

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 3352 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	4	3	2	3	33	20
50<80	+	+	0	+	1	1
35<50	+	+	+	+	+	+
20<35	+	+	+	1	3	1
10<20	2	1	1	3	10	2
6<10	+	1	+	+	1	+
3<6	+	+	+	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	3	1	+	+	+	0

Barrow

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 14692 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	2	2	5	38	13
50<80	+	+	+	1	3	+
35<50	0	+	+	+	2	+
20<35	+	+	1	2	6	+
10<20	+	1	1	2	7	+
6<10	+	+	1	1	3	+
3<6	+	+	+	+	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	1	+	+	+	0

Lonely

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 3395 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	3	43	18
50<80	+	+	+	+	3	1
35<50	+	+	+	+	1	+
20<35	+	+	+	1	4	1
10<20	1	1	1	2	10	1
6<10	+	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	+	+	0	+	0	0
0<1.5	1	+	+	+	+	0

Oliktok

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 3336 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	2	2	3	38	19
50<80	0	+	+	+	2	+
35<50	+	+	+	+	1	+
20<35	+	+	+	1	4	2
10<20	1	1	1	3	10	1
6<10	+	+	+	+	1	0
3<6	+	+	+	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	2	1	+	+	+	0

Barter

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 15211 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	3	2	2	4	20	30
50<80	+	+	+	1	4	2
35<50	+	+	+	1	1	1
20<35	1	1	1	2	4	1
10<20	1	1	1	3	5	1
6<10	+	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	+	+	0	+	0
0<1.5	4	1	+	+	+	0

Tuktoyaktuk

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 3023 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	2	14	50
50<80	+	+	+	+	3	2
35<50	+	0	+	+	1	1
20<35	+	+	+	1	5	3
10<20	1	1	1	2	5	2
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	0	0	0
0<1.5	2	+	1	+	0	0

Cape Parry

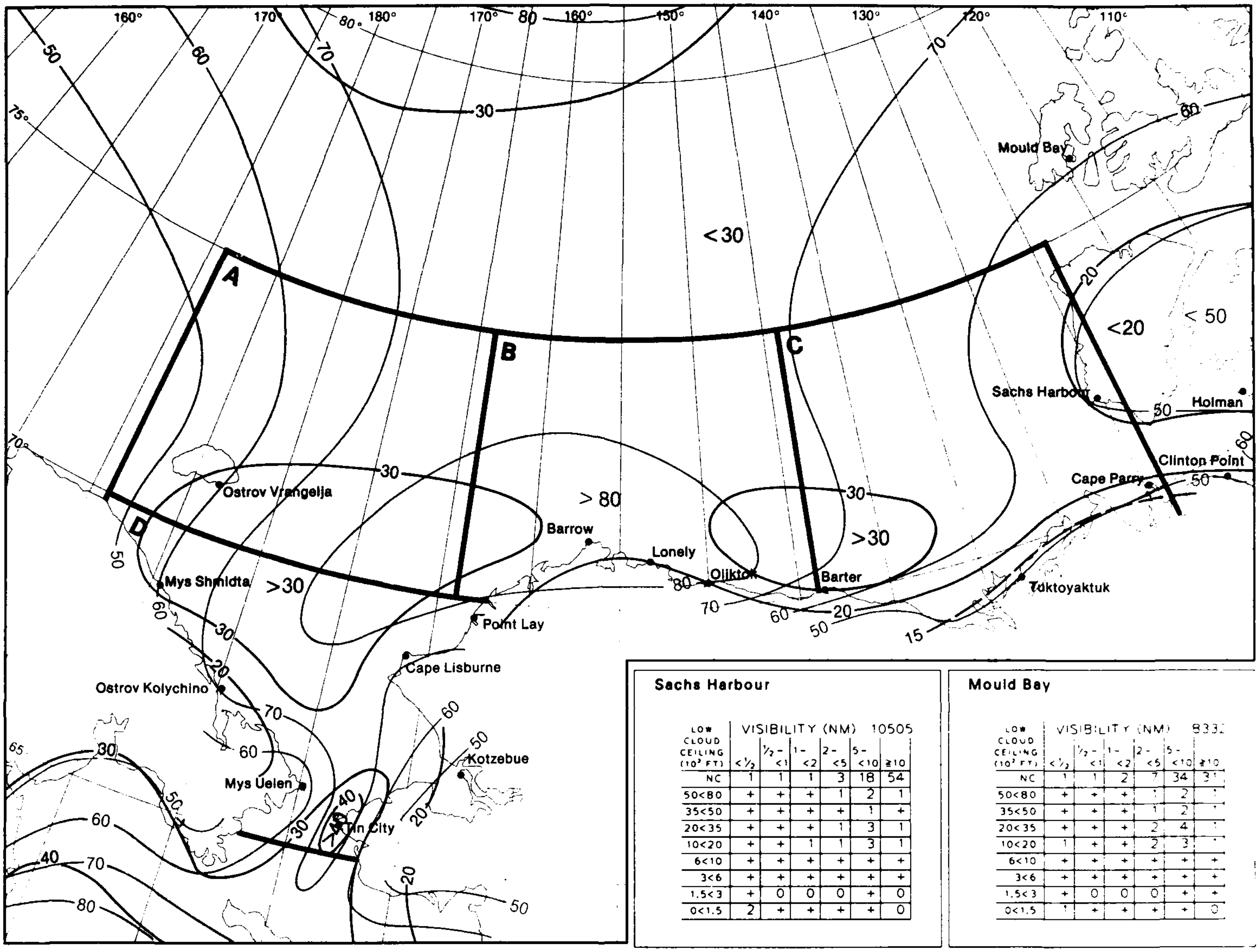
LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 18124 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	2	6	27	40
50<80	+	+	+	1	1	1
35<50	+	+	+	1	1	1
20<35	+	+	1	1	3	1
10<20	+	1	1	1	3	1
6<10	+	+	+	+	1	+
3<6	+	+	+	+	+	+
1.5<3	0	+	+	+	+	0
0<1.5	1	+	+	+	+	0

Clinton Point

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4026 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	1	+	1	11	59
50<80	+	+	+	+	2	2
35<50	+	+	+	+	1	2
20<35	+	1	+	1	4	3
10<20	1	1	1	1	2	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	0	0
1.5<3	0	0	0	+	0	+
0<1.5	1	+	0	+	0	0

Holman

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 2934 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	+	1	8	55
50<80	+	+	+	+	2	3
35<50	+	+	+	+	1	1
20<35	1	+	1	1	5	4
10<20	1	1	1	3	5	1
6<10	+	+	+	+	+	0
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	2	+	+	+	+	+



Sachs Harbour

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 10505 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	1	3	18	54
50<80	+	+	+	1	2	1
35<50	+	+	+	+	1	+
20<35	+	+	+	1	3	1
10<20	+	+	1	1	3	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	0	0	0	+	0
0<1.5	2	+	+	+	+	0

Mould Bay

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 833[illegible] <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	2	7	34	3[illegible]
50<80	+	+	+	1	2	[illegible]
35<50	+	+	+	1	2	[illegible]
20<35	+	+	+	2	4	[illegible]
10<20	1	+	+	2	3	[illegible]
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	0	0	0	+	+
0<1.5	1	+	+	+	+	0

Marine Area A

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 61 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	0	0	2	11	56
50<80	0	0	0	7	0	8
35<50	0	0	0	0	0	0
20<35	0	0	0	3	0	3
10<20	0	0	0	7	0	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	2	0	0	0

Marine Area B

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 57 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	4	0	0	28	49
50<80	0	0	0	0	2	2
35<50	0	0	0	0	0	0
20<35	0	0	0	2	0	2
10<20	0	0	2	0	0	2
6<10	0	0	2	2	0	0
3<6	0	0	0	0	2	0
1.5<3	0	0	0	0	0	0
0<1.5	4	0	0	0	0	0

Marine Area C

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 485 <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	+	1	5	19	60
50<80	0	+	0	+	1	1
35<50	0	0	+	0	+	+
20<35	0	0	0	1	2	1
10<20	0	+	0	1	2	1
6<10	0	+	0	+	+	0
3<6	+	0	+	1	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

Marine Area D

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) [illegible] <½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	[illegible]	0
50<80	0	0	0	0	[illegible]	0
35<50	0	0	0	0	[illegible]	0
20<35	0	0	0	0	29	2[illegible]
10<20	7	0	0	0	0	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	14	0	7	0	0

4 Ceiling and Visibility (mid range) — **December**

Map 5. Visibility thresholds

TABLE – Percent frequency of visibility (nautical miles).

Albers Equal–Area Conic Projection

Graphs: Visibility thresholds

Percent frequency of visibility of various ranges for designated marine areas and coastal stations.

VISIBILITY (NM)	%
<.5	1.2
.5 <1	2.9
1 <2	1.2
2 <5	3.2
5 <10	30.7
≧10	60.8
N=	342

(2.9% of the observed visibilities were <1 but ≥1/2 nautical mile. Other percentages can be similarly interpreted.)

N = Observation count.

Nautical miles	.5	1	2	5	10
Kilometers	1	2	4	10	20

Visibility is a term that denotes the greatest distance from an observer that an object of known characteristics can be seen and identified with the unaided eye. When the visibility is not the same in all directions, the greatest distance common to one-half or more of the horizon circle is determined. Visibilities are difficult to measure at sea because of the lack of reference points. Climatically, many low visibility observations probably are missed because the observer is too busy with other duties (this is a form of fair weather bias). Also, some observers seem to report reduced visibilities at night because of darkness, though this tendency has abated in recent years. However, the coarseness of the visibility intervals (see code table) tends to minimize the problem, thereby permitting the summarized data to be relatively consistent. Visibilities greater than 25 nautical miles should be interpreted cautiously because the earth's curvature makes it impossible to see that distance horizontally from the bridge of most ships.

VISIBILITY (WMO Code, 1982)

Code figs.	Visibility (vv) in m/km	Visibility (vv) in yd./naut. mi.	Code figs.
90	less than 50 m	less than 55 yd.	90
91	50 but less than 200 m	55 but less than 220 yd.	91
92	200 but less than 500 m	220 but less than 550 yd.	92
93	500 but less than 1000 m	550 but less than ½ n. mi.	93
94	1 but less than 2 km	½ but less than 1 n. mi.	94
95	2 but less than 4 km	1 but less than 2 n. mi.	95
96	4 but less than 10 km	2 but less than 5 n. mi.	96
97	10 but less than 20 km	5 but less than 11 n. mi.	97
98	20 but less than 50 km	11 but less than 27 n. mi.	98
99	50 km or more	27 n. mi. or more	99

The visibility ranges corresponding to various weather types are as follows:

Code figs.	Weather types	Code figs.
90–92	Heavy snow, heavy drizzle	
93	Moderate snow, moderate drizzle	
94–96	Heavy rain Moderate rain	
97–99	Light rain	
94–99	Light snow, light drizzle	
	Fog, thick haze	90–92
	Mist, haze	94–96

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	5.1
.5 <1	4.3
1<2	7.7
2 <5	19.2
5 <10	11.7
≧10	51.9
N=	4184

Mys Shmidta

VISIBILITY (NM)	%
<.5	10.1
.5 <1	9.4
1<2	10.5
2 <5	15.7
5 <10	17.7
≧10	36.6
N=	4726

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	2.7
.5 <1	2.1
1<2	8.0
2 <5	12.1
5 <10	50.5
≧10	24.6
N=	2935

Mys Uelen

VISIBILITY (NM)	%
<.5	2.6
.5 <1	2.9
1<2	10.0
2 <5	20.2
5 <10	10.2
≧10	54.1
N=	4713

Tin City

VISIBILITY (NM)	%
<.5	12.8
.5 <1	8.0
1<2	12.0
2 <5	16.9
5 <10	28.5
≧10	21.8
N=	19165

Kotzebue

VISIBILITY (NM)	%
<.5	4.6
.5 <1	3.5
1<2	3.9
2 <5	8.6
5 <10	23.6
≧10	55.8
N=	22050

Cape Lisburne

VISIBILITY (NM)	%
<.5	2.8
.5 <1	5.3
1<2	6.7
2 <5	13.8
5 <10	51.6
≧10	19.7
N=	18462

Point Lay

VISIBILITY (NM)	%
<.5	14.4
.5 <1	4.5
1<2	4.3
2 <5	8.5
5 <10	44.6
≧10	23.8
N=	3337

Barrow

VISIBILITY (NM)	%
<.5	6.4
.5 <1	4.7
1<2	4.9
2 <5	12.6
5 <10	59.3
≧10	12.2
N=	18798

Lonely

VISIBILITY (NM)	%
<.5	5.8
.5 <1	4.0
1<2	4.1
2 <5	7.9
5 <10	56.3
≧10	22.0
N=	3476

Oliktok

VISIBILITY (NM)	%
<.5	10.0
.5 <1	5.1
1<2	3.2
2 <5	8.8
5 <10	52.8
≧10	20.0
N=	3301

Barter

VISIBILITY (NM)	%
<.5	12.6
.5 <1	5.5
1<2	4.9
2 <5	9.1
5 <10	30.7
≧10	37.1
N=	18317

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	5.2
.5 <1	3.5
1<2	3.3
2 <5	6.0
5 <10	28.5
≧10	53.5
N=	3224

Cape Parry

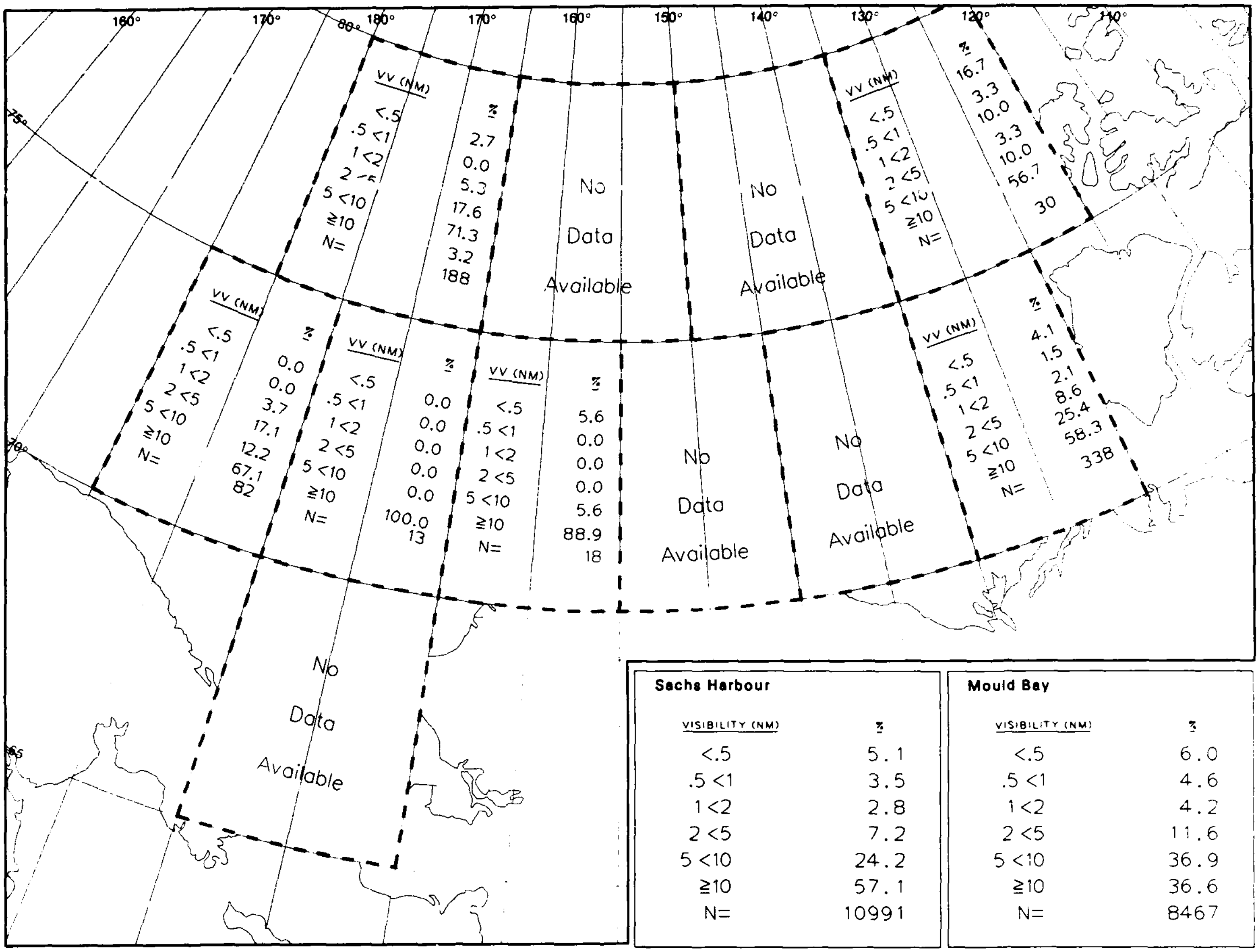
VISIBILITY (NM)	%
<.5	6.1
.5 <1	4.2
1<2	4.9
2 <5	10.0
5 <10	33.4
≧10	41.4
N=	19836

Clinton Point

VISIBILITY (NM)	%
<.5	8.0
.5 <1	3.2
1<2	1.5
2 <5	6.0
5 <10	18.5
≧10	62.9
N=	4628

Holman

VISIBILITY (NM)	%
<.5	12.4
.5 <1	2.9
1<2	2.1
2 <5	5.1
5 <10	18.1
≧10	59.3
N=	3218



Sachs Harbour

VISIBILITY (NM)	%
<.5	5.1
.5 <1	3.5
1 <2	2.8
2 <5	7.2
5 <10	24.2
≥10	57.1
N=	10991

Mould Bay

VISIBILITY (NM)	%
<.5	6.0
.5 <1	4.6
1 <2	4.2
2 <5	11.6
5 <10	36.9
≥10	36.6
N=	8467

Marine Area A

VISIBILITY (NM)	%
<.5	0.9
.5 <1	1.8
1 <2	3.5
2 <5	12.3
5 <10	9.6
≥10	71.9
N=	114

Marine Area B

No Data Available

Marine Area C

VISIBILITY (NM)	%
<.5	7.8
.5 <1	2.4
1 <2	2.7
2 <5	9.2
5 <10	25.7
≥10	52.2
N=	412

Marine Area D

VISIBILITY (NM)	%
<.5	9.1
.5 <1	0.0
1 <2	18.2
2 <5	9.1
5 <10	27.3
≥10	36.4
N=	11

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	5.2
.5 <1	2.7
1<2	4.9
2 <5	16.3
5 <10	11.7
≧10	59.2
N=	3917

Mys Shmidta

VISIBILITY (NM)	%
<.5	10.0
.5 <1	11.0
1<2	9.0
2 <5	12.5
5 <10	16.3
≧10	41.2
N=	4391

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	1.4
.5 <1	2.6
1<2	6.7
2 <5	12.7
5 <10	46.2
≧10	30.5
N=	2811

Mys Uelen

VISIBILITY (NM)	%
<.5	1.8
.5 <1	2.7
1<2	8.2
2 <5	19.1
5 <10	13.0
≧10	55.1
N=	4385

Tin City

VISIBILITY (NM)	%
<.5	13.3
.5 <1	9.0
1<2	13.2
2 <5	18.3
5 <10	24.6
≧10	21.6
N=	17454

Kotzebue

VISIBILITY (NM)	%
<.5	4.8
.5 <1	3.2
1<2	4.0
2 <5	8.0
5 <10	21.8
≧10	58.3
N=	19710

Cape Lisburne

VISIBILITY (NM)	%
<.5	2.9
.5 <1	3.4
1<2	5.4
2 <5	11.5
5 <10	46.5
≧10	30.2
N=	16991

Point Lay

VISIBILITY (NM)	%
<.5	11.9
.5 <1	5.5
1<2	3.0
2 <5	8.0
5 <10	48.5
≧10	23.0
N=	3033

Barrow

VISIBILITY (NM)	%
<.5	4.3
.5 <1	3.9
1<2	5.9
2 <5	15.9
5 <10	60.2
≧10	9.8
N=	17135

Lonely

VISIBILITY (NM)	%
<.5	4.7
.5 <1	3.6
1<2	3.7
2 <5	5.9
5 <10	57.6
≧10	24.5
N=	3172

Oliktok

VISIBILITY (NM)	%
<.5	6.0
.5 <1	3.8
1<2	3.8
2 <5	8.2
5 <10	57.6
≧10	20.5
N=	3067

Barter

VISIBILITY (NM)	%
<.5	12.2
.5 <1	5.4
1<2	4.5
2 <5	8.9
5 <10	30.1
≧10	38.8
N=	16695

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	3.8
.5 <1	3.5
1<2	3.1
2 <5	6.7
5 <10	25.6
≧10	57.2
N=	2921

Cape Parry

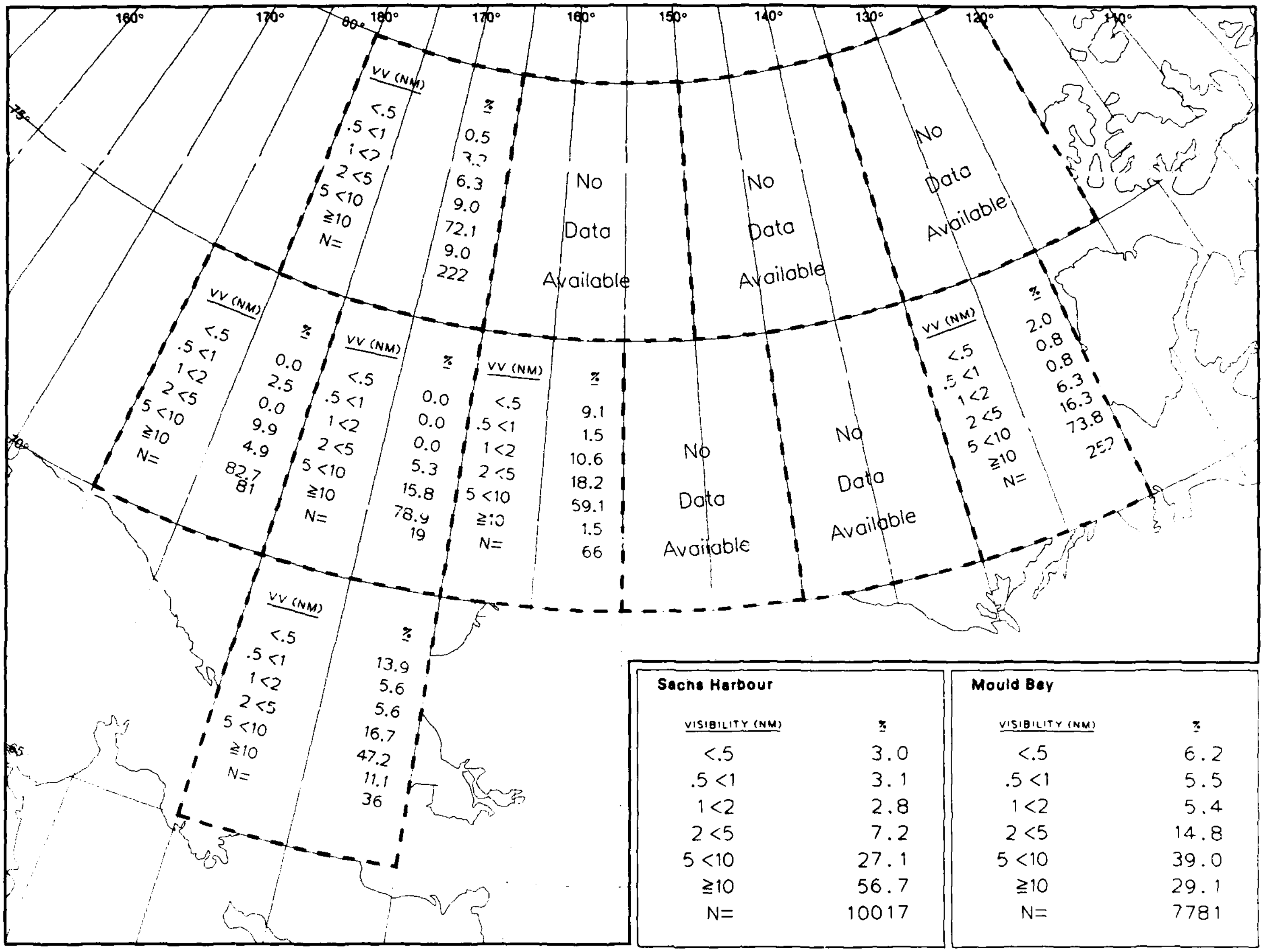
VISIBILITY (NM)	%
<.5	6.0
.5 <1	4.1
1<2	4.3
2 <5	10.3
5 <10	31.4
≧10	44.0
N=	18087

Clinton Point

VISIBILITY (NM)	%
<.5	7.1
.5 <1	1.9
1<2	2.7
2 <5	4.8
5 <10	16.9
≧10	66.7
N=	4240

Holman

VISIBILITY (NM)	%
<.5	7.9
.5 <1	2.6
1<2	1.8
2 <5	5.5
5 <10	17.0
≧10	65.3
N=	2934



Sachs Harbour

VISIBILITY (NM)	%
<.5	3.0
.5 <1	3.1
1<2	2.8
2 <5	7.2
5 <10	27.1
≥10	56.7
N=	10017

Mould Bay

VISIBILITY (NM)	%
<.5	6.2
.5 <1	5.5
1<2	5.4
2 <5	14.8
5 <10	39.0
≥10	29.1
N=	7781

Marine Area A

VISIBILITY (NM)	%
<.5	0.0
.5 <1	1.9
1<2	1.0
2 <5	9.7
5 <10	7.8
≥10	79.6
N=	103

Marine Area B

VISIBILITY (NM)	%
<.5	9.0
.5 <1	1.5
1<2	9.0
2 <5	17.9
5 <10	59.7
≥10	3.0
N=	67

Marine Area C

VISIBILITY (NM)	%
<.5	3.3
.5 <1	2.4
1<2	2.1
2 <5	6.3
5 <10	19.1
≥10	66.9
N=	335

Marine Area D

VISIBILITY (NM)	%
<.5	12.8
.5 <1	5.1
1<2	7.7
2 <5	15.4
5 <10	43.6
≥10	15.4
N=	39

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	5.2
.5 <1	3.2
1 <2	5.2
2 <5	13.4
5 <10	10.5
≧10	62.5
N=	4415

Mys Shmidta

VISIBILITY (NM)	%
<.5	9.6
.5 <1	8.8
1 <2	7.6
2 <5	11.4
5 <10	15.3
≧10	47.2
N=	4902

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	0.9
.5 <1	2.0
1 <2	5.2
2 <5	9.6
5 <10	41.6
≧10	40.8
N=	3056

Mys Uelen

VISIBILITY (NM)	%
<.5	1.5
.5 <1	1.3
1 <2	5.7
2 <5	20.5
5 <10	9.6
≧10	61.5
N=	4896

Tin City

VISIBILITY (NM)	%
<.5	11.8
.5 <1	8.5
1 <2	13.3
2 <5	17.0
5 <10	24.3
≧10	25.1
N=	19615

Kotzebue

VISIBILITY (NM)	%
<.5	3.2
.5 <1	2.7
1 <2	3.6
2 <5	8.1
5 <10	18.3
≧10	64.0
N=	21962

Cape Lisburne

VISIBILITY (NM)	%
<.5	1.8
.5 <1	2.7
1 <2	5.2
2 <5	11.9
5 <10	42.7
≧10	35.8
N=	19207

Point Lay

VISIBILITY (NM)	%
<.5	15.6
.5 <1	4.9
1 <2	4.2
2 <5	8.2
5 <10	44.0
≧10	23.2
N=	3349

Barrow

VISIBILITY (NM)	%
<.5	3.3
.5 <1	2.7
1 <2	4.1
2 <5	11.7
5 <10	67.0
≧10	11.2
N=	18813

Lonely

VISIBILITY (NM)	%
<.5	5.0
.5 <1	3.8
1 <2	3.5
2 <5	8.2
5 <10	56.0
≧10	23.5
N=	3528

Oliktok

VISIBILITY (NM)	%
<.5	6.2
.5 <1	4.4
1 <2	4.3
2 <5	6.9
5 <10	56.2
≧10	22.0
N=	3373

Barter

VISIBILITY (NM)	%
<.5	7.9
.5 <1	5.1
1 <2	4.5
2 <5	8.8
5 <10	30.0
≧10	43.7
N=	18627

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	2.6
.5 <1	2.3
1 <2	2.8
2 <5	5.5
5 <10	23.0
≧10	63.8
N=	3218

Cape Parry

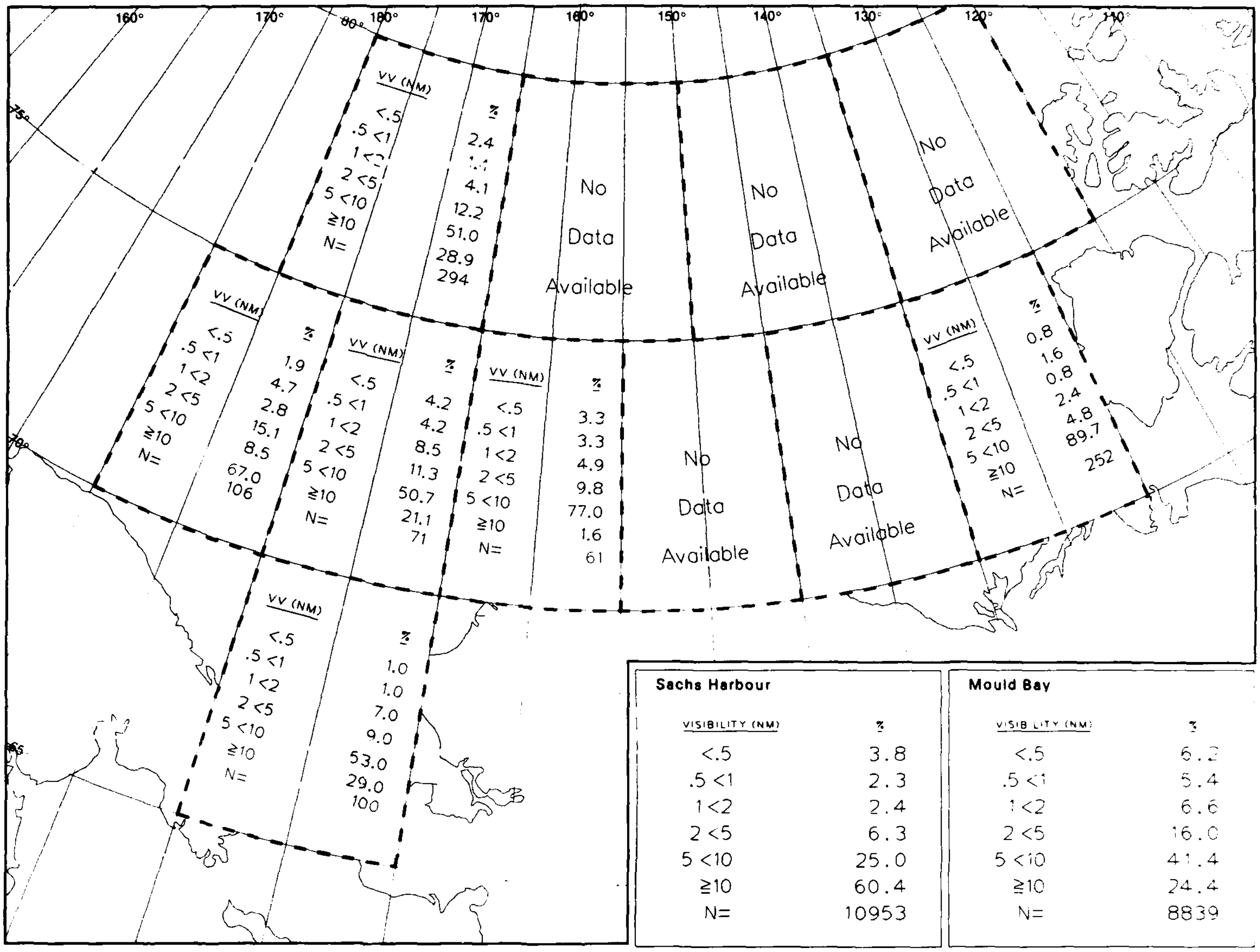
VISIBILITY (NM)	%
<.5	4.1
.5 <1	4.2
1 <2	4.3
2 <5	9.9
5 <10	29.2
≧10	48.2
N=	19838

Clinton Point

VISIBILITY (NM)	%
<.5	5.3
.5 <1	2.6
1 <2	2.4
2 <5	5.8
5 <10	20.2
≧10	63.7
N=	4702

Holman

VISIBILITY (NM)	%
<.5	7.4
.5 <1	3.0
1 <2	2.5
2 <5	4.9
5 <10	16.0
≧10	66.1
N=	3216



Sachs Harbour

VISIBILITY (NM)	%
<.5	3.8
.5 <1	2.3
1<2	2.4
2 <5	6.3
5 <10	25.0
≥10	60.4
N=	10953

Mould Bay

VISIBILITY (NM)	%
<.5	6.2
.5 <1	5.4
1<2	6.6
2 <5	16.0
5 <10	41.4
≥10	24.4
N=	8839

Marine Area A

VISIBILITY (NM)	%
<.5	2.5
.5 <1	4.0
1<2	5.5
2 <5	12.1
5 <10	27.6
≥10	48.2
N=	199

Marine Area B

VISIBILITY (NM)	%
<.5	3.6
.5 <1	3.6
1<2	3.6
2 <5	10.9
5 <10	74.5
≥10	3.6
N=	55

Marine Area C

VISIBILITY (NM)	%
<.5	4.2
.5 <1	2.7
1<2	3.0
2 <5	4.2
5 <10	7.7
≥10	78.3
N=	336

Marine Area D

VISIBILITY (NM)	%
<.5	1.0
.5 <1	1.0
1<2	6.8
2 <5	9.7
5 <10	52.4
≥10	29.1
N=	103

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	3.6
.5 <1	2.2
1 <2	5.1
2 <5	13.5
5 <10	8.1
≧10	67.5
N=	4453

Mys Shmidta

VISIBILITY (NM)	%
<.5	5.3
.5 <1	6.0
1 <2	6.0
2 <5	11.2
5 <10	14.7
≧10	56.7
N=	4706

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	1.5
.5 <1	0.9
1 <2	4.9
2 <5	11.1
5 <10	29.5
≧10	52.1
N=	2794

Mys Uelen

VISIBILITY (NM)	%
<.5	2.0
.5 <1	1.2
1 <2	5.3
2 <5	19.2
5 <10	10.9
≧10	61.4
N=	4695

Tin City

VISIBILITY (NM)	%
<.5	10.6
.5 <1	8.5
1 <2	13.7
2 <5	17.7
5 <10	23.4
≧10	26.0
N=	19317

Kotzebue

VISIBILITY (NM)	%
<.5	2.9
.5 <1	2.5
1 <2	3.3
2 <5	6.7
5 <10	14.8
≧10	69.8
N=	21267

Cape Lisburne

VISIBILITY (NM)	%
<.5	2.0
.5 <1	3.4
1 <2	5.9
2 <5	13.2
5 <10	38.9
≧10	36.7
N=	19177

Point Lay

VISIBILITY (NM)	%
<.5	13.8
.5 <1	4.3
1 <2	5.4
2 <5	7.9
5 <10	43.6
≧10	24.9
N=	3179

Barrow

VISIBILITY (NM)	%
<.5	3.4
.5 <1	3.0
1 <2	3.4
2 <5	11.4
5 <10	65.1
≧10	13.6
N=	18229

Lonely

VISIBILITY (NM)	%
<.5	3.8
.5 <1	4.2
1 <2	3.4
2 <5	8.3
5 <10	56.2
≧10	24.1
N=	3330

Oliktok

VISIBILITY (NM)	%
<.5	5.2
.5 <1	3.4
1 <2	4.4
2 <5	8.6
5 <10	56.9
≧10	21.4
N=	3223

Barter

VISIBILITY (NM)	%
<.5	5.9
.5 <1	4.3
1 <2	4.8
2 <5	8.7
5 <10	26.7
≧10	49.5
N=	18134

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	3.7
.5 <1	2.8
1 <2	2.9
2 <5	5.3
5 <10	19.0
≧10	66.4
N=	3154

Cape Parry

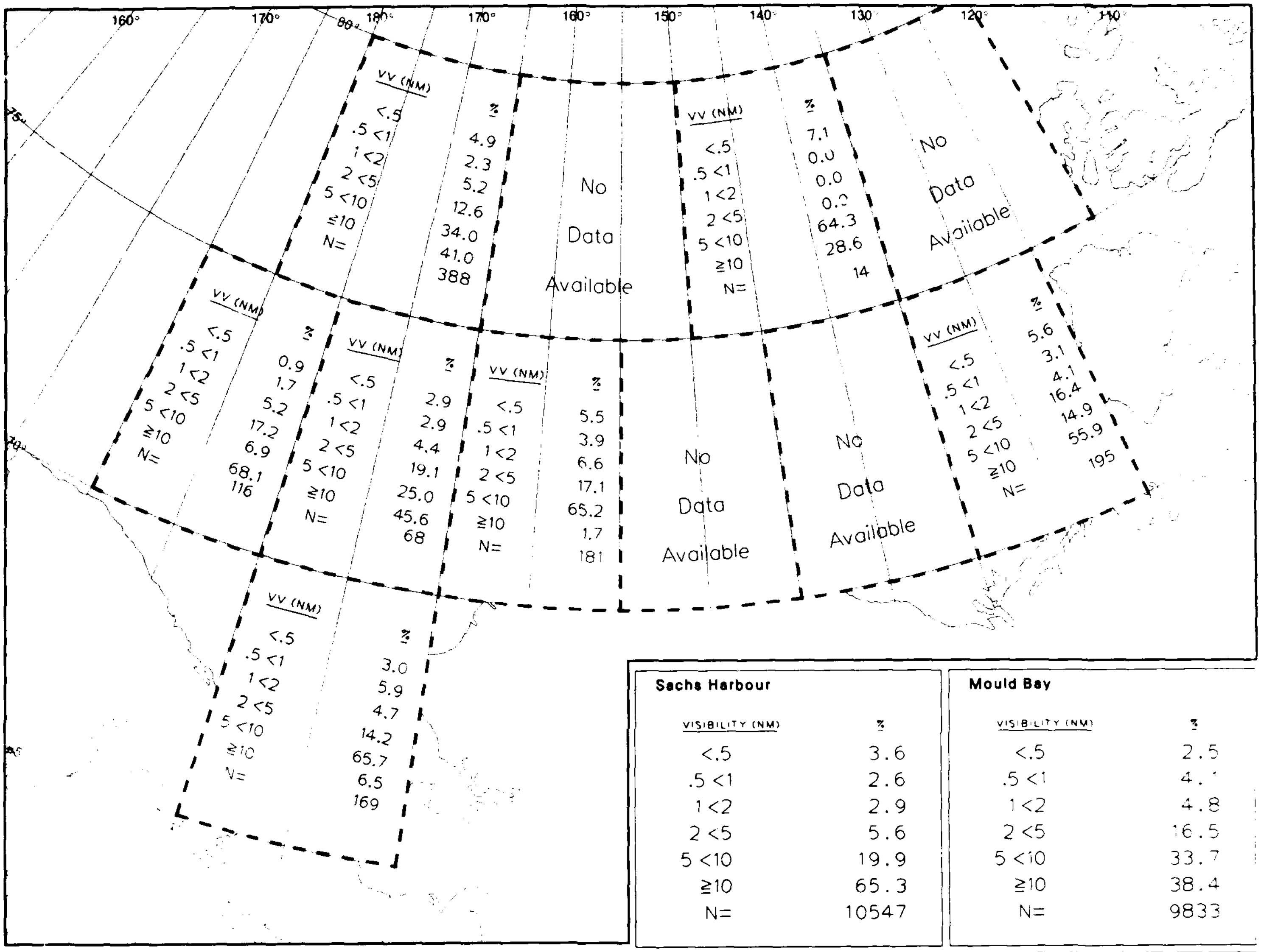
VISIBILITY (NM)	%
<.5	5.4
.5 <1	3.7
1 <2	3.8
2 <5	9.8
5 <10	25.5
≧10	51.7
N=	19197

Clinton Point

VISIBILITY (NM)	%
<.5	6.6
.5 <1	2.9
1 <2	3.1
2 <5	7.7
5 <10	18.3
≧10	61.4
N=	4456

Holman

VISIBILITY (NM)	%
<.5	5.6
.5 <1	2.6
1 <2	2.9
2 <5	6.6
5 <10	17.0
≧10	65.4
N=	3111



Sachs Harbour

VISIBILITY (NM)	%
<.5	3.6
.5 <1	2.6
1 <2	2.9
2 <5	5.6
5 <10	19.9
≥10	65.3
N=	10547

Mould Bay

VISIBILITY (NM)	%
<.5	2.5
.5 <1	4.1
1 <2	4.8
2 <5	16.5
5 <10	33.7
≥10	38.4
N=	9833

Marine Area A

VISIBILITY (NM)	%
<.5	1.6
.5 <1	2.2
1 <2	4.9
2 <5	18.0
5 <10	13.7
≥10	59.6
N=	183

Marine Area B

VISIBILITY (NM)	%
<.5	6.1
.5 <1	4.1
1 <2	6.6
2 <5	16.3
5 <10	64.3
≥10	2.6
N=	196

Marine Area C

VISIBILITY (NM)	%
<.5	9.0
.5 <1	3.1
1 <2	3.1
2 <5	16.0
5 <10	20.3
≥10	48.4
N=	256

Marine Area D

VISIBILITY (NM)	%
<.5	2.8
.5 <1	5.7
1 <2	4.5
2 <5	13.6
5 <10	67.0
≥10	6.3
N=	176

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	6.0
.5 <1	2.0
1 <2	3.5
2 <5	16.8
5 <10	12.1
≥10	59.6
N=	4436

Mys Shmidta

VISIBILITY (NM)	%
<.5	7.4
.5 <1	5.9
1 <2	7.6
2 <5	13.6
5 <10	14.5
≥10	51.0
N=	4688

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	7.2
.5 <1	0.9
1 <2	5.0
2 <5	11.7
5 <10	18.9
≥10	56.3
N=	2982

Mys Uelen

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	[illegible]
1 <2	3.5
2 <5	14.2
5 <10	10.9
≥10	64.5
N=	[illegible]

Tin City

VISIBILITY (NM)	%
<.5	16.9
.5 <1	6.6
1 <2	8.5
2 <5	12.7
5 <10	17.8
≥10	37.4
N=	20813

Kotzebue

VISIBILITY (NM)	%
<.5	2.2
.5 <1	1.9
1 <2	1.8
2 <5	3.4
5 <10	7.4
≥10	83.2
N=	21220

Cape Lisburne

VISIBILITY (NM)	%
<.5	2.9
.5 <1	3.2
1 <2	4.1
2 <5	10.5
5 <10	32.5
≥10	46.8
N=	20501

Point Lay

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	[illegible]
1 <2	[illegible]
2 <5	[illegible]
5 <10	[illegible]
≥10	[illegible]
N=	[illegible]

Barrow

VISIBILITY (NM)	%
<.5	5.9
.5 <1	3.6
1 <2	4.2
2 <5	13.1
5 <10	62.2
≥10	11.1
N=	18099

Lonely

VISIBILITY (NM)	%
<.5	6.5
.5 <1	5.2
1 <2	4.5
2 <5	10.7
5 <10	54.0
≥10	19.0
N=	3307

Oliktok

VISIBILITY (NM)	%
<.5	8.1
.5 <1	6.2
1 <2	5.8
2 <5	10.0
5 <10	52.7
≥10	17.2
N=	3243

Barter

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	5.9
1 <2	6.2
2 <5	11.3
5 <10	27.2
≥10	42.0
N=	[illegible]

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	5.4
.5 <1	2.2
1 <2	2.7
2 <5	5.1
5 <10	22.6
≥10	61.9
N=	3305

Cape Parry

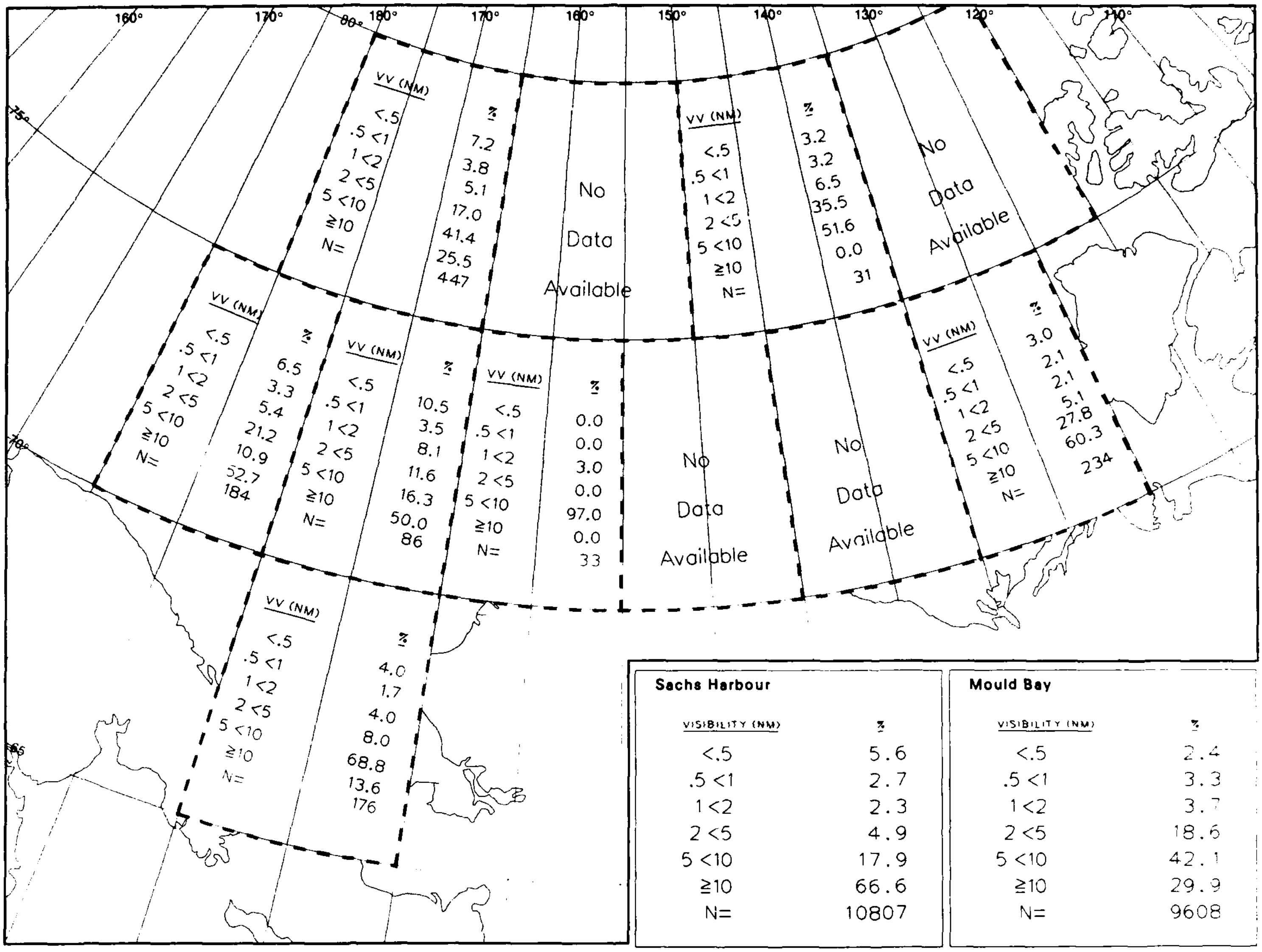
VISIBILITY (NM)	%
<.5	5.9
.5 <1	4.0
1 <2	3.2
2 <5	7.4
5 <10	23.0
≥10	56.5
N=	19348

Clinton Point

VISIBILITY (NM)	%
<.5	7.9
.5 <1	2.3
1 <2	2.5
2 <5	6.0
5 <10	16.4
≥10	64.8
N=	4420

Holman

VISIBILITY (NM)	%
<.5	11.0
.5 <1	2.4
1 <2	2.3
2 <5	5.2
5 <10	17.2
≥10	61.9
N=	3218



Sachs Harbour

VISIBILITY (NM)	%
<.5	5.6
.5 <1	2.7
1 <2	2.3
2 <5	4.9
5 <10	17.9
≥10	66.6
N=	10807

Mould Bay

VISIBILITY (NM)	%
<.5	2.4
.5 <1	3.3
1 <2	3.7
2 <5	18.6
5 <10	42.1
≥10	29.9
N=	9608

Marine Area A

VISIBILITY (NM)	%
<.5	10.8
.5 <1	3.2
1 <2	5.7
2 <5	7.6
5 <10	19.0
≥10	53.8
N=	158

Marine Area B

VISIBILITY (NM)	%
<.5	0.0
.5 <1	2.8
1 <2	2.8
2 <5	0.0
5 <10	86.1
≥10	8.3
N=	36

Marine Area C

VISIBILITY (NM)	%
<.5	6.6
.5 <1	3.5
1 <2	1.4
2 <5	5.0
5 <10	24.6
≥10	58.9
N=	423

Marine Area D

VISIBILITY (NM)	%
<.5	3.9
.5 <1	[illegible].7
1 <2	3.9
2 <5	7.7
5 <10	69.1
≥10	13.8
N=	181

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	9.5
.5 <1	1.4
1<2	2.2
2 <5	12.6
5 <10	9.6
≧10	64.7
N=	4329

Mys Shmidta

VISIBILITY (NM)	%
<.5	11.2
.5 <1	5.8
1<2	5.9
2 <5	8.7
5 <10	8.3
≧10	60.0
N=	4557

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	15.3
.5 <1	0.7
1<2	2.7
2 <5	6.3
5 <10	9.1
≧10	66.0
N=	2857

Mys Uelen

VISIBILITY (NM)	%
<.5	11.5
.5 <1	0.9
1<2	3.1
2 <5	8.8
5 <10	11.5
≧10	64.2
N=	4534

Tin City

VISIBILITY (NM)	%
<.5	26.6
.5 <1	4.7
1<2	4.8
2 <5	9.2
5 <10	12.4
≧10	42.4
N=	20039

Kotzebue

VISIBILITY (NM)	%
<.5	3.6
.5 <1	2.0
1<2	1.5
2 <5	2.5
5 <10	6.7
≧10	83.8
N=	20512

Cape Lisburne

VISIBILITY (NM)	%
<.5	6.5
.5 <1	4.7
1<2	4.1
2 <5	8.9
5 <10	28.8
≧10	47.0
N=	19435

Point Lay

VISIBILITY (NM)	%
<.5	5.3
.5 <1	1.8
1<2	1.6
2 <5	3.4
5 <10	26.9
≧10	61.0
N=	3137

Barrow

VISIBILITY (NM)	%
<.5	8.4
.5 <1	4.8
1<2	4.3
2 <5	9.7
5 <10	58.6
≧10	14.2
N=	17498

Lonely

VISIBILITY (NM)	%
<.5	8.6
.5 <1	4.1
1<2	2.4
2 <5	5.5
5 <10	53.2
≧10	26.3
N=	3222

Oliktok

VISIBILITY (NM)	%
<.5	8.3
.5 <1	4.0
1<2	2.4
2 <5	6.1
5 <10	47.2
≧10	32.0
N=	3160

Barter

VISIBILITY (NM)	%
<.5	10.1
.5 <1	5.9
1<2	5.0
2 <5	7.2
5 <10	18.6
≧10	53.2
N=	17672

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	4.8
.5 <1	2.1
1<2	1.4
2 <5	3.2
5 <10	15.2
≧10	73.4
N=	3117

Cape Parry

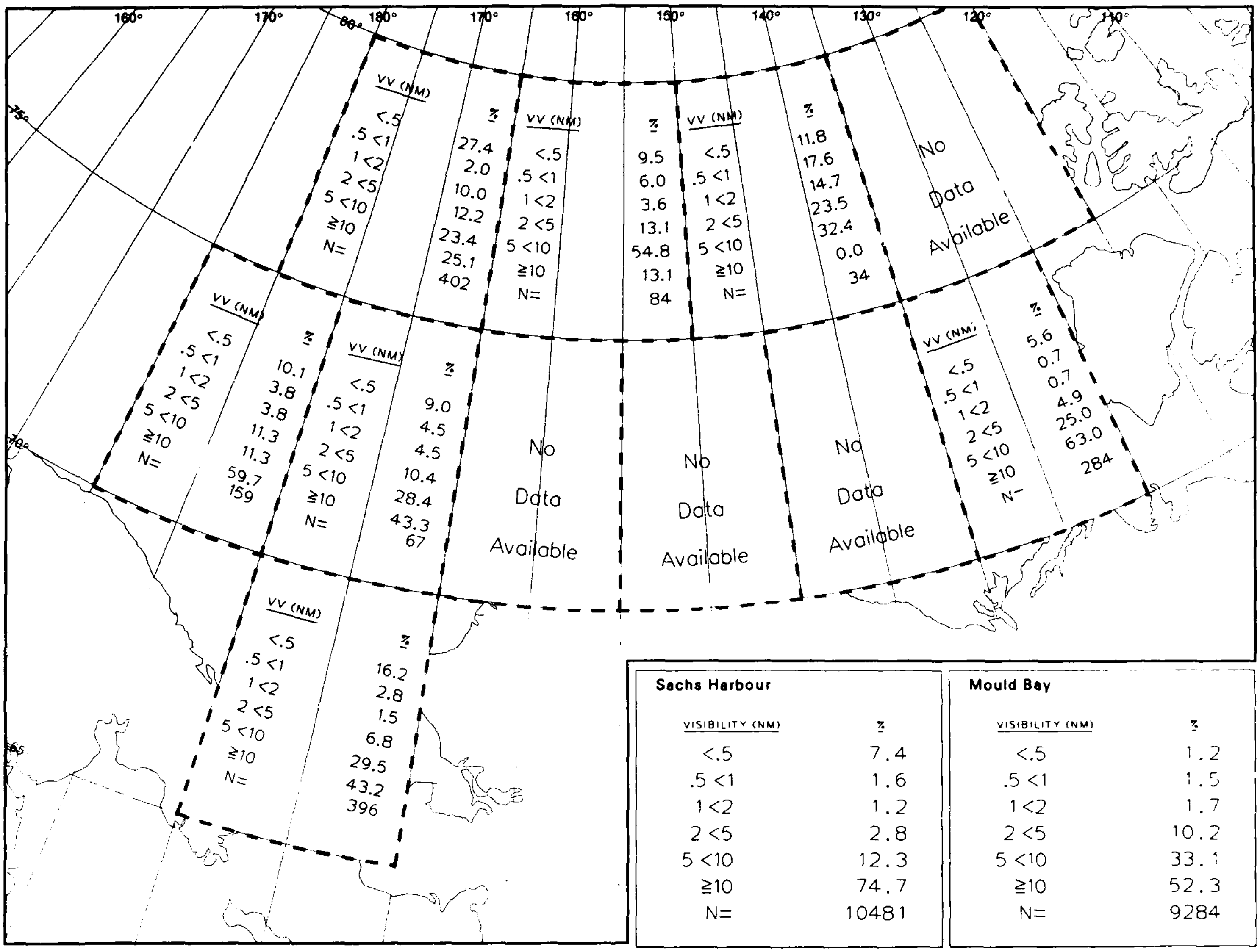
VISIBILITY (NM)	%
<.5	6.6
.5 <1	3.2
1<2	2.6
2 <5	4.6
5 <10	13.4
≧10	69.6
N=	18719

Clinton Point

VISIBILITY (NM)	%
<.5	3.2
.5 <1	1.5
1<2	1.2
2 <5	2.4
5 <10	9.8
≧10	82.0
N=	4450

Holman

VISIBILITY (NM)	%
<.5	10.9
.5 <1	1.6
1<2	1.1
2 <5	2.7
5 <10	10.5
≧10	73.1
N=	3112



Sachs Harbour

VISIBILITY (NM)	%
<.5	7.4
.5 <1	1.6
1 <2	1.2
2 <5	2.8
5 <10	12.3
≥10	74.7
N=	10481

Mould Bay

VISIBILITY (NM)	%
<.5	1.2
.5 <1	1.5
1 <2	1.7
2 <5	10.2
5 <10	33.1
≥10	52.3
N=	9284

Marine Area A

VISIBILITY (NM)	%
<.5	13.1
.5 <1	3.0
1 <2	4.0
2 <5	10.1
5 <10	20.2
≥10	49.5
N=	99

Marine Area B

No Data Available

Marine Area C

VISIBILITY (NM)	%
<.5	6.2
.5 <1	2.0
1 <2	1.3
2 <5	4.9
5 <10	16.5
≥10	69.2
N=	613

Marine Area D

VISIBILITY (NM)	%
<.5	15.1
.5 <1	2.4
1 <2	2.0
2 <5	6.8
5 <10	25.6
≥10	48.1
N=	503

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	14.0
.5 <1	1.4
1 <2	2.6
2 <5	10.1
5 <10	7.7
≥10	64.3
N=	4271

Mys Shmidta

VISIBILITY (NM)	%
<.5	12.9
.5 <1	4.7
1 <2	5.1
2 <5	8.5
5 <10	8.3
≥10	60.4
N=	4545

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	15.4
.5 <1	0.4
1 <2	1.6
2 <5	5.9
5 <10	7.6
≥10	69.1
N=	2643

Mys Uelen

VISIBILITY (NM)	%
<.5	11.9
.5 <1	0.7
1 <2	2.0
2 <5	8.8
5 <10	14.9
≥10	61.7
N=	4536

Tin City

VISIBILITY (NM)	%
<.5	25.2
.5 <1	5.0
1 <2	5.0
2 <5	11.2
5 <10	15.0
≥10	38.5
N=	20713

Kotzebue

VISIBILITY (NM)	%
<.5	1.4
.5 <1	0.9
1 <2	1.1
2 <5	3.2
5 <10	8.5
≥10	85.0
N=	21131

Cape Lisburne

VISIBILITY (NM)	%
<.5	4.4
.5 <1	3.5
1 <2	4.0
2 <5	9.6
5 <10	30.8
≥10	47.7
N=	19446

Point Lay

VISIBILITY (NM)	%
<.5	4.4
.5 <1	1.9
1 <2	2.2
2 <5	5.5
5 <10	28.3
≥10	57.8
N=	303[illegible]

Barrow

VISIBILITY (NM)	%
<.5	8.9
.5 <1	4.9
1 <2	3.7
2 <5	8.5
5 <10	54.1
≥10	19.7
N=	18771

Lonely

VISIBILITY (NM)	%
<.5	10.7
.5 <1	3.8
1 <2	2.0
2 <5	5.0
5 <10	49.2
≥10	29.4
N=	3181

Oliktok

VISIBILITY (NM)	%
<.5	9.0
.5 <1	3.8
1 <2	2.4
2 <5	5.1
5 <10	43.9
≥10	35.7
N=	3073

Barter

VISIBILITY (NM)	%
<.5	14.2
.5 <1	4.[illegible]
1 <2	2.8
2 <5	4.8
5 <10	15.0
≥10	59.0
N=	18347

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	2.4
.5 <1	1.4
1 <2	1.6
2 <5	2.2
5 <10	12.0
≥10	80.5
N=	3216

Cape Perry

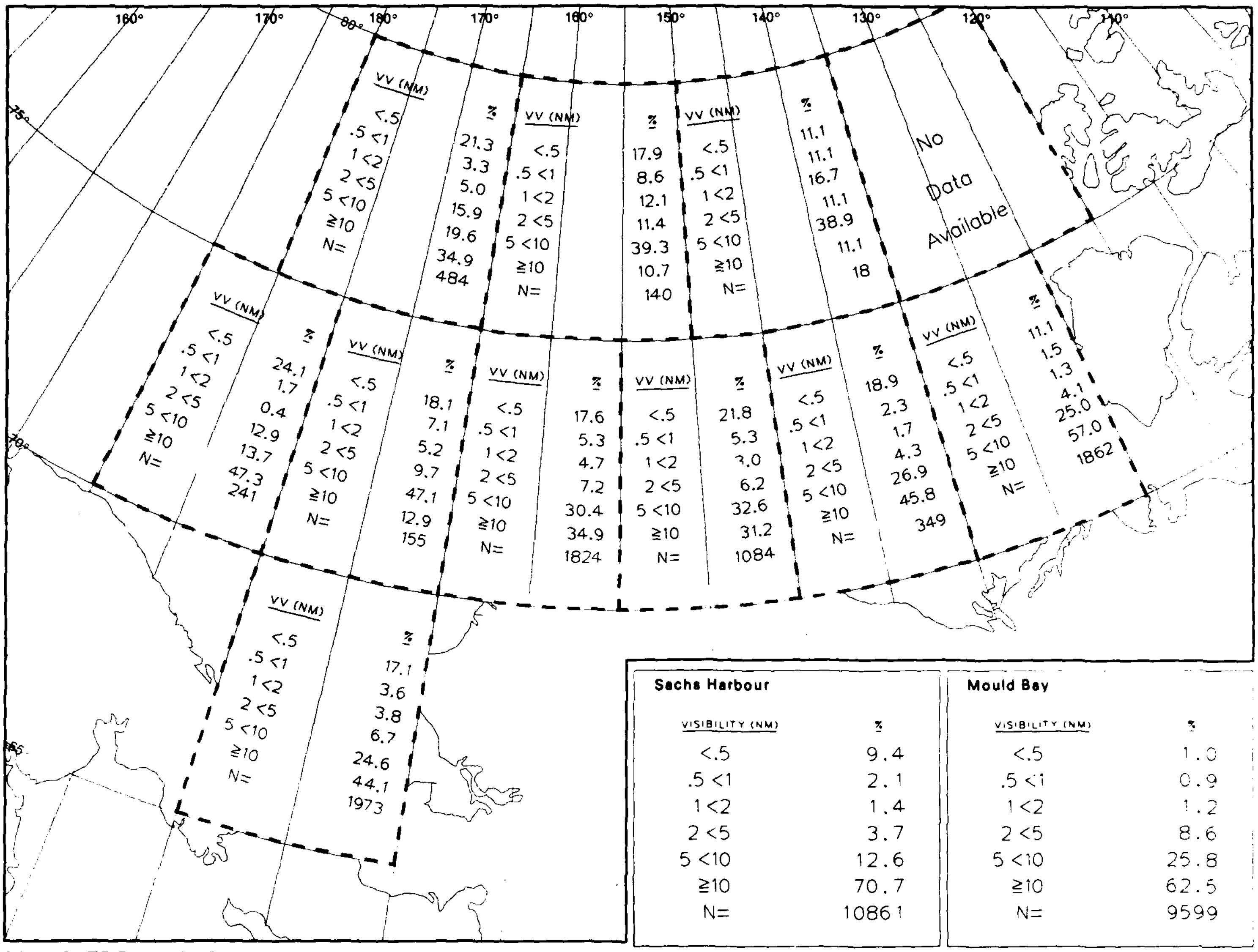
VISIBILITY (NM)	%
<.5	7.7
.5 <1	2.9
1 <2	2.5
2 <5	4.1
5 <10	13.5
≥10	69.4
N=	19343

Clinton Point

VISIBILITY (NM)	%
<.5	7.2
.5 <1	1.6
1 <2	1.3
2 <5	3.1
5 <10	8.8
≥10	77.9
N=	4453

Holman

VISIBILITY (NM)	%
<.5	6.7
.5 <1	1.1
1 <2	0.7
2 <5	2.6
5 <10	9.7
≥10	79.1
N=	3214



Sachs Harbour

VISIBILITY (NM)	%
<.5	9.4
.5 <1	2.1
1 <2	1.4
2 <5	3.7
5 <10	12.6
≥10	70.7
N=	10861

Mould Bay

VISIBILITY (NM)	%
<.5	1.0
.5 <1	0.9
1 <2	1.2
2 <5	8.6
5 <10	25.8
≥10	62.5
N=	9599

Marine Area A

VISIBILITY (NM)	%
<.5	21.1
.5 <1	5.1
1 <2	5.1
2 <5	9.5
5 <10	31.4
≥10	27.6
N=	369

Marine Area B

VISIBILITY (NM)	%
<.5	19.7
.5 <1	5.3
1 <2	4.0
2 <5	6.8
5 <10	30.6
≥10	33.7
N=	2906

Marine Area C

VISIBILITY (NM)	%
<.5	10.8
.5 <1	1.6
1 <2	1.2
2 <5	4.5
5 <10	24.1
≥10	57.8
N=	3562

Marine Area D

VISIBILITY (NM)	%
<.5	16.5
.5 <1	3.2
1 <2	3.5
2 <5	6.3
5 <10	24.[illegible]
≥10	46.4
N=	2528

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	16.7
.5 <1	1.5
1<2	2.6
2 <5	11.8
5 <10	10.3
≧10	57.0
N=	4278

Mys Shmidta

VISIBILITY (NM)	%
<.5	12.4
.5 <1	7.3
1<2	7.9
2 <5	10.3
5 <10	11.2
≧10	50.9
N=	4582

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	20.1
.5 <1	0.6
1<2	2.4
2 <5	9.4
5 <10	17.6
≧10	49.8
N=	2591

Mys Uelen

VISIBILITY (NM)	%
<.5	13.2
.5 <1	0.8
1<2	2.8
2 <5	10.6
5 <10	17.1
≧10	55.5
N=	4549

Tin City

VISIBILITY (NM)	%
<.5	14.6
.5 <1	4.3
1<2	6.5
2 <5	12.6
5 <10	20.9
≧10	41.1
N=	20855

Kotzebue

VISIBILITY (NM)	%
<.5	0.4
.5 <1	0.6
1<2	1.3
2 <5	3.6
5 <10	14.2
≧10	79.9
N=	21794

Cape Lisburne

VISIBILITY (NM)	%
<.5	2.2
.5 <1	2.7
1<2	3.5
2 <5	10.8
5 <10	36.0
≧10	44.7
N=	20280

Point Lay

VISIBILITY (NM)	%
<.5	3.7
.5 <1	2.5
1<2	3.1
2 <5	7.6
5 <10	33.1
≧10	50.0
N=	3298

Barrow

VISIBILITY (NM)	%
<.5	9.3
.5 <1	4.9
1<2	4.6
2 <5	10.7
5 <10	57.0
≧10	13.5
N=	19325

Lonely

VISIBILITY (NM)	%
<.5	14.2
.5 <1	3.8
1<2	2.7
2 <5	7.0
5 <10	48.1
≧10	24.1
N=	3433

Oliktok

VISIBILITY (NM)	%
<.5	11.0
.5 <1	5.1
1<2	3.1
2 <5	7.8
5 <10	46.4
≧10	26.5
N=	3322

Barter

VISIBILITY (NM)	%
<.5	17.6
.5 <1	5.5
1<2	4.5
2 <5	6.9
5 <10	22.0
≧10	43.5
N=	18470

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	3.0
.5 <1	2.3
1<2	1.9
2 <5	3.9
5 <10	15.8
≧10	73.1
N=	3223

Cape Perry

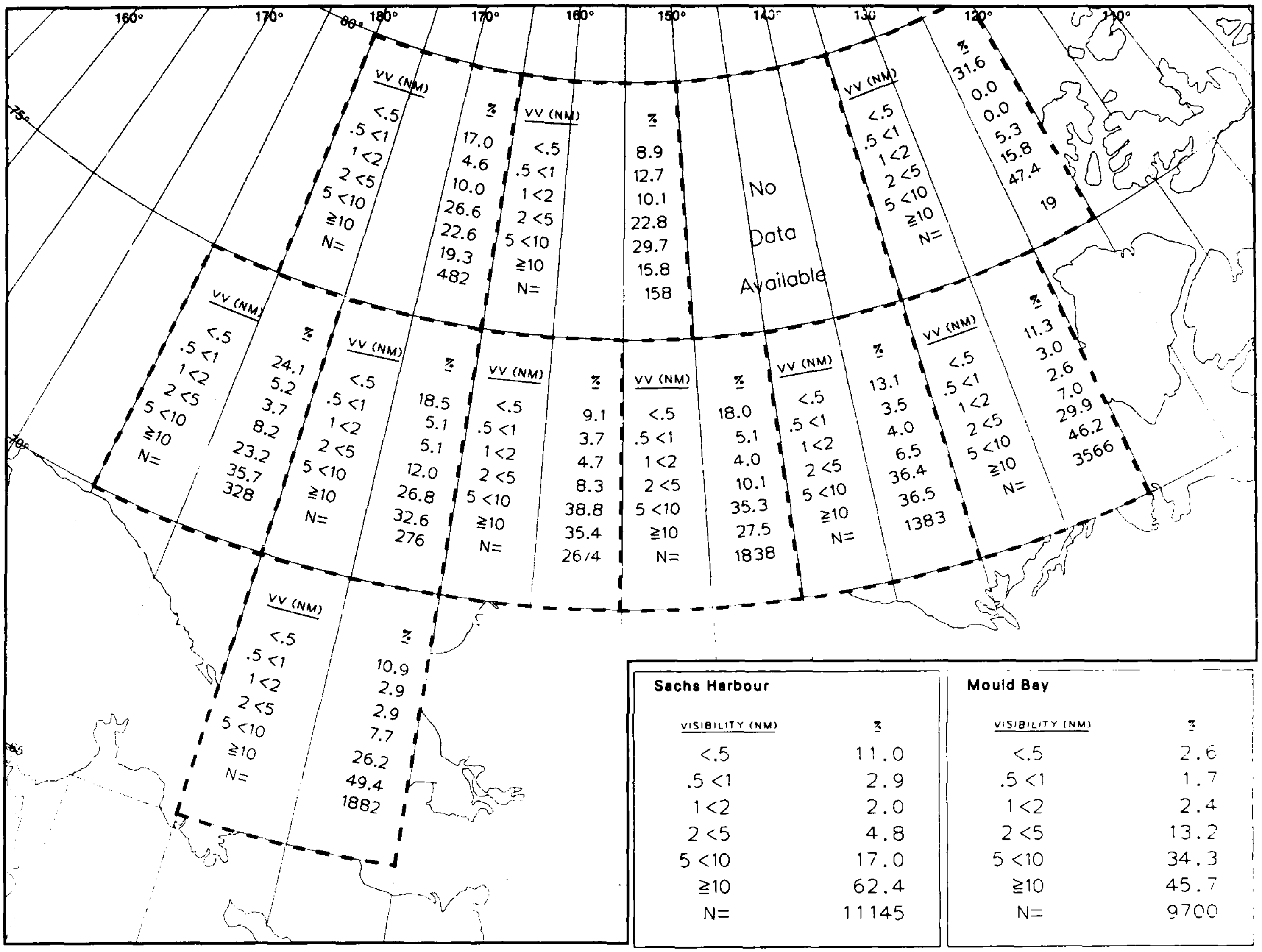
VISIBILITY (NM)	%
<.5	6.7
.5 <1	3.2
1<2	2.8
2 <5	6.1
5 <10	20.4
≧10	60.8
N=	19340

Clinton Point

VISIBILITY (NM)	%
<.5	5.3
.5 <1	1.3
1<2	0.8
2 <5	5.2
5 <10	12.1
≧10	75.4
N=	4483

Holman

VISIBILITY (NM)	%
<.5	10.1
.5 <1	1.9
1<2	1.4
2 <5	2.9
5 <10	15.2
≧10	68.4
N=	3202



Sachs Harbour

VISIBILITY (NM)	%
<.5	11.0
.5 <1	2.9
1<2	2.0
2 <5	4.8
5 <10	17.0
≥10	62.4
N=	11145

Mould Bay

VISIBILITY (NM)	%
<.5	2.6
.5 <1	1.7
1<2	2.4
2 <5	13.2
5 <10	34.3
≥10	45.7
N=	9700

Marine Area A

VISIBILITY (NM)	%
<.5	17.8
.5 <1	4.2
1<2	4.5
2 <5	9.3
5 <10	25.5
≥10	38.7
N=	600

Marine Area B

VISIBILITY (NM)	%
<.5	12.7
.5 <1	4.3
1<2	4.4
2 <5	9.2
5 <10	37.6
≥10	31.9
N=	4587

Marine Area C

VISIBILITY (NM)	%
<.5	11.4
.5 <1	2.7
1<2	2.9
2 <5	6.7
5 <10	29.4
≥10	46.9
N=	7680

Marine Area D

VISIBILITY (NM)	%
<.5	11.1
.5 <1	2.7
1<2	2.9
2 <5	7.9
5 <10	25.6
≥10	49.8
N=	2314

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	7.0
.5 <1	1.5
1 <2	3.5
2 <5	16.3
5 <10	13.2
≧10	58.6
N=	4091

Mys Shmidta

VISIBILITY (NM)	%
<.5	8.5
.5 <1	7.6
1 <2	7.6
2 <5	11.5
5 <10	12.9
≧10	52.0
N=	4340

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	13.0
.5 <1	0.9
1 <2	2.5
2 <5	9.2
5 <10	33.7
≧10	40.7
N=	2471

Mys Uelen

VISIBILITY (NM)	%
<.5	7.8
.5 <1	0.8
1 <2	3.0
2 <5	11.3
5 <10	16.8
≧10	60.2
N=	4374

Tin City

VISIBILITY (NM)	%
<.5	6.1
.5 <1	2.3
1 <2	4.9
2 <5	11.4
5 <10	28.5
≧10	46.9
N=	19573

Kotzebue

VISIBILITY (NM)	%
<.5	0.4
.5 <1	0.5
1 <2	0.9
2 <5	3.0
5 <10	15.4
≧10	79.8
N=	21065

Cape Lisburne

VISIBILITY (NM)	%
<.5	0.7
.5 <1	1.7
1 <2	2.8
2 <5	10.4
5 <10	45.9
≧10	38.5
N=	19538

Point Lay

VISIBILITY (NM)	%
<.5	3.2
.5 <1	2.4
1 <2	2.5
2 <5	7.5
5 <10	42.3
≧10	42.1
N=	3237

Barrow

VISIBILITY (NM)	%
<.5	5.1
.5 <1	3.8
1 <2	4.9
2 <5	13.5
5 <10	62.0
≧10	10.6
N=	18707

Lonely

VISIBILITY (NM)	%
<.5	8.3
.5 <1	4.2
1 <2	3.2
2 <5	7.8
5 <10	56.1
≧10	20.4
N=	3337

Oliktok

VISIBILITY (NM)	%
<.5	8.8
.5 <1	5.9
1 <2	4.2
2 <5	8.9
5 <10	52.8
≧10	19.5
N=	3251

Barter

VISIBILITY (NM)	%
<.5	14.6
.5 <1	6.5
1 <2	5.3
2 <5	8.1
5 <10	26.2
≧10	39.4
N=	17742

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	3.9
.5 <1	1.8
1 <2	2.5
2 <5	3.8
5 <10	24.2
≧10	63.8
N=	3119

Cape Perry

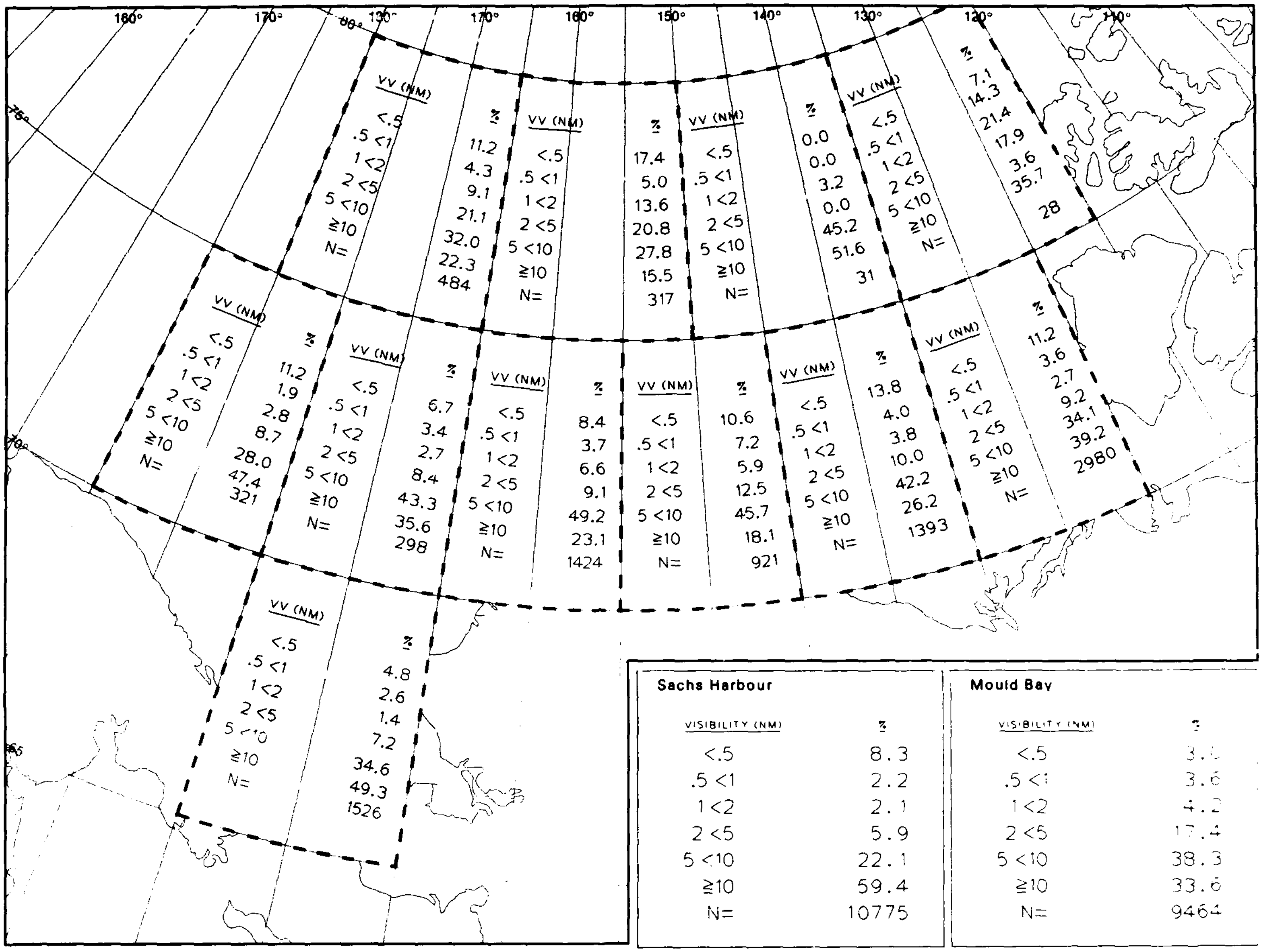
VISIBILITY (NM)	%
<.5	5.2
.5 <1	4.0
1 <2	3.3
2 <5	7.6
5 <10	26.6
≧10	53.4
N=	18975

Clinton Point

VISIBILITY (NM)	%
<.5	5.7
.5 <1	2.7
1 <2	1.0
2 <5	5.0
5 <10	14.8
≧10	70.8
N=	4356

Holman

VISIBILITY (NM)	%
<.5	10.8
.5 <1	2.8
1 <2	2.2
2 <5	5.0
5 <10	17.0
≧10	62.1
N=	3114



Sachs Harbour

VISIBILITY (NM)	%
<.5	8.3
.5 <1	2.2
1 <2	2.1
2 <5	5.9
5 <10	22.1
≧10	59.4
N=	10775

Mould Bay

VISIBILITY (NM)	%
<.5	3.0
.5 <1	3.6
1 <2	4.2
2 <5	17.4
5 <10	38.3
≧10	33.6
N=	9464

Marine Area A

VISIBILITY (NM)	%
<.5	8.5
.5 <1	2.9
1 <2	2.7
2 <5	10.7
5 <10	36.0
≧10	39.2
N=	625

Marine Area B

VISIBILITY (NM)	%
<.5	9.6
.5 <1	5.2
1 <2	6.3
2 <5	10.3
5 <10	47.3
≧10	21.2
N=	2346

Marine Area C

VISIBILITY (NM)	%
<.5	10.2
.5 <1	3.3
1 <2	3.1
2 <5	9.3
5 <10	36.3
≧10	37.8
N=	7096

Marine Area D

VISIBILITY (NM)	%
<.5	4.3
.5 <1	2.3
1 <2	1.8
2 <5	7.0
5 <10	33.9
≧10	50.7
N=	2045

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	3.5
.5 <1	3.2
1 <2	5.4
2 <5	18.8
5 <10	13.6
≧10	55.4
N=	4279

Mys Shmidta

VISIBILITY (NM)	%
<.5	7.8
.5 <1	8.8
1 <2	7.6
2 <5	12.2
5 <10	16.2
≧10	47.5
N=	4600

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	3.7
.5 <1	1.9
1 <2	8.4
2 <5	16.8
5 <10	39.7
≧10	29.4
N=	2760

Mys Uelen

VISIBILITY (NM)	%
<.5	1.5
.5 <1	1.5
1 <2	5.8
2 <5	16.9
5 <10	15.4
≧10	58.8
N=	4565

Tin City

VISIBILITY (NM)	%
<.5	5.3
.5 <1	3.9
1 <2	7.2
2 <5	13.0
5 <10	33.0
≧10	37.6
N=	19749

Kotzebue

VISIBILITY (NM)	%
<.5	1.2
.5 <1	1.6
1 <2	2.4
2 <5	5.4
5 <10	18.2
≧10	71.3
N=	21788

Cape Lisburne

VISIBILITY (NM)	%
<.5	1.8
.5 <1	3.8
1 <2	4.9
2 <5	12.6
5 <10	46.6
≧10	30.3
N=	20333

Point Lay

VISIBILITY (NM)	%
<.5	4.1
.5 <1	3.5
1 <2	3.2
2 <5	9.2
5 <10	47.7
≧10	32.3
N=	3186

Barrow

VISIBILITY (NM)	%
<.5	3.8
.5 <1	4.3
1 <2	5.4
2 <5	16.1
5 <10	60.4
≧10	10.0
N=	19089

Lonely

VISIBILITY (NM)	%
<.5	4.3
.5 <1	3.5
1 <2	3.9
2 <5	10.3
5 <10	58.4
≧10	19.6
N=	3431

Oliktok

VISIBILITY (NM)	%
<.5	4.1
.5 <1	6.1
1 <2	4.8
2 <5	11.6
5 <10	55.2
≧10	18.3
N=	3352

Barter

VISIBILITY (NM)	%
<.5	6.7
.5 <1	6.4
1 <2	7.3
2 <5	14.2
5 <10	32.3
≧10	33.1
N=	18077

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	2.7
.5 <1	3.0
1 <2	4.4
2 <5	7.8
5 <10	29.0
≧10	53.2
N=	3217

Cape Parry

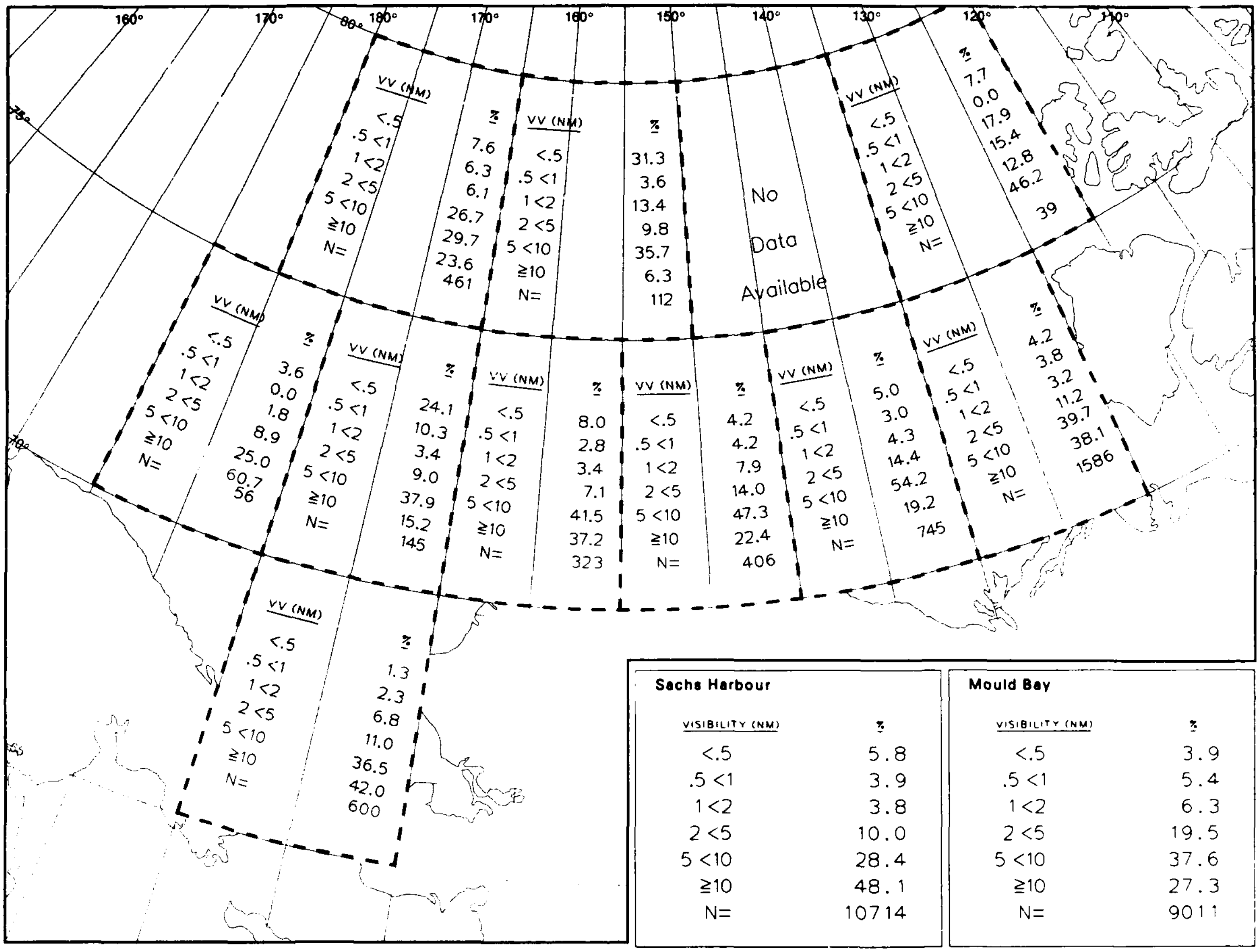
VISIBILITY (NM)	%
<.5	3.2
.5 <1	4.5
1 <2	4.5
2 <5	12.0
5 <10	33.7
≧10	42.1
N=	19839

Clinton Point

VISIBILITY (NM)	%
<.5	7.9
.5 <1	2.9
1 <2	2.4
2 <5	7.4
5 <10	21.1
≧10	58.2
N=	4475

Holman

VISIBILITY (NM)	%
<.5	5.6
.5 <1	3.7
1 <2	3.4
2 <5	7.9
5 <10	22.1
≧10	57.2
N=	3221



Sachs Harbour

VISIBILITY (NM)	%
<.5	5.8
.5 <1	3.9
1<2	3.8
2 <5	10.0
5 <10	28.4
≥10	48.1
N=	10714

Mould Bay

VISIBILITY (NM)	%
<.5	3.9
.5 <1	5.4
1<2	6.3
2 <5	19.5
5 <10	37.6
≥10	27.3
N=	9011

Marine Area A

VISIBILITY (NM)	%
<.5	21.1
.5 <1	8.2
1<2	2.6
2 <5	9.3
5 <10	36.1
≥10	22.7
N=	194

Marine Area B

VISIBILITY (NM)	%
<.5	5.8
.5 <1	3.5
1<2	5.6
2 <5	11.3
5 <10	48.1
≥10	25.7
N=	859

Marine Area C

VISIBILITY (NM)	%
<.5	4.5
.5 <1	3.6
1<2	4.0
2 <5	12.7
5 <10	42.3
≥10	32.9
N=	3633

Marine Area D

VISIBILITY (NM)	%
<.5	3.0
.5 <1	3.1
1<2	7.1
2 <5	10.0
5 <10	35.6
≥10	41.2
N=	842

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	6.7
.5 <1	5.5
1<2	8.7
2 <5	21.4
5 <10	12.2
≧10	45.5
N=	4149

Mys Shmidta

VISIBILITY (NM)	%
<.5	15.2
.5 <1	10.4
1<2	8.3
2 <5	16.0
5 <10	15.8
≧10	34.3
N=	4375

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	2.0
.5 <1	2.6
1<2	9.2
2 <5	14.1
5 <10	49.4
≧10	22.6
N=	2621

Mys Uelen

VISIBILITY (NM)	%
<.5	2.4
.5 <1	3.4
1<2	9.6
2 <5	20.2
5 <10	12.9
≧10	51.5
N=	4359

Tin City

VISIBILITY (NM)	%
<.5	12.2
.5 <1	6.4
1<2	10.0
2 <5	15.3
5 <10	31.9
≧10	24.2
N=	19227

Kotzebue

VISIBILITY (NM)	%
<.5	2.7
.5 <1	2.7
1<2	3.6
2 <5	7.5
5 <10	24.5
≧10	58.9
N=	21085

Cape Lisburne

VISIBILITY (NM)	%
<.5	2.3
.5 <1	3.9
1<2	5.7
2 <5	15.3
5 <10	52.8
≧10	20.0
N=	19506

Point Lay

VISIBILITY (NM)	%
<.5	9.3
.5 <1	4.7
1<2	4.2
2 <5	9.0
5 <10	46.8
≧10	25.9
N=	3240

Barrow

VISIBILITY (NM)	%
<.5	6.4
.5 <1	4.5
1<2	5.7
2 <5	14.7
5 <10	58.2
≧10	10.4
N=	18468

Lonely

VISIBILITY (NM)	%
<.5	5.8
.5 <1	4.2
1<2	4.6
2 <5	10.6
5 <10	56.4
≧10	18.4
N=	3332

Oliktok

VISIBILITY (NM)	%
<.5	6.2
.5 <1	5.0
1<2	4.5
2 <5	11.6
5 <10	52.1
≧10	20.6
N=	3223

Barter

VISIBILITY (NM)	%
<.5	8.2
.5 <1	5.6
1<2	6.3
2 <5	11.6
5 <10	35.2
≧10	33.2
N=	17448

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	2.8
.5 <1	3.0
1<2	4.0
2 <5	6.8
5 <10	27.6
≧10	55.8
N=	3117

Cape Parry

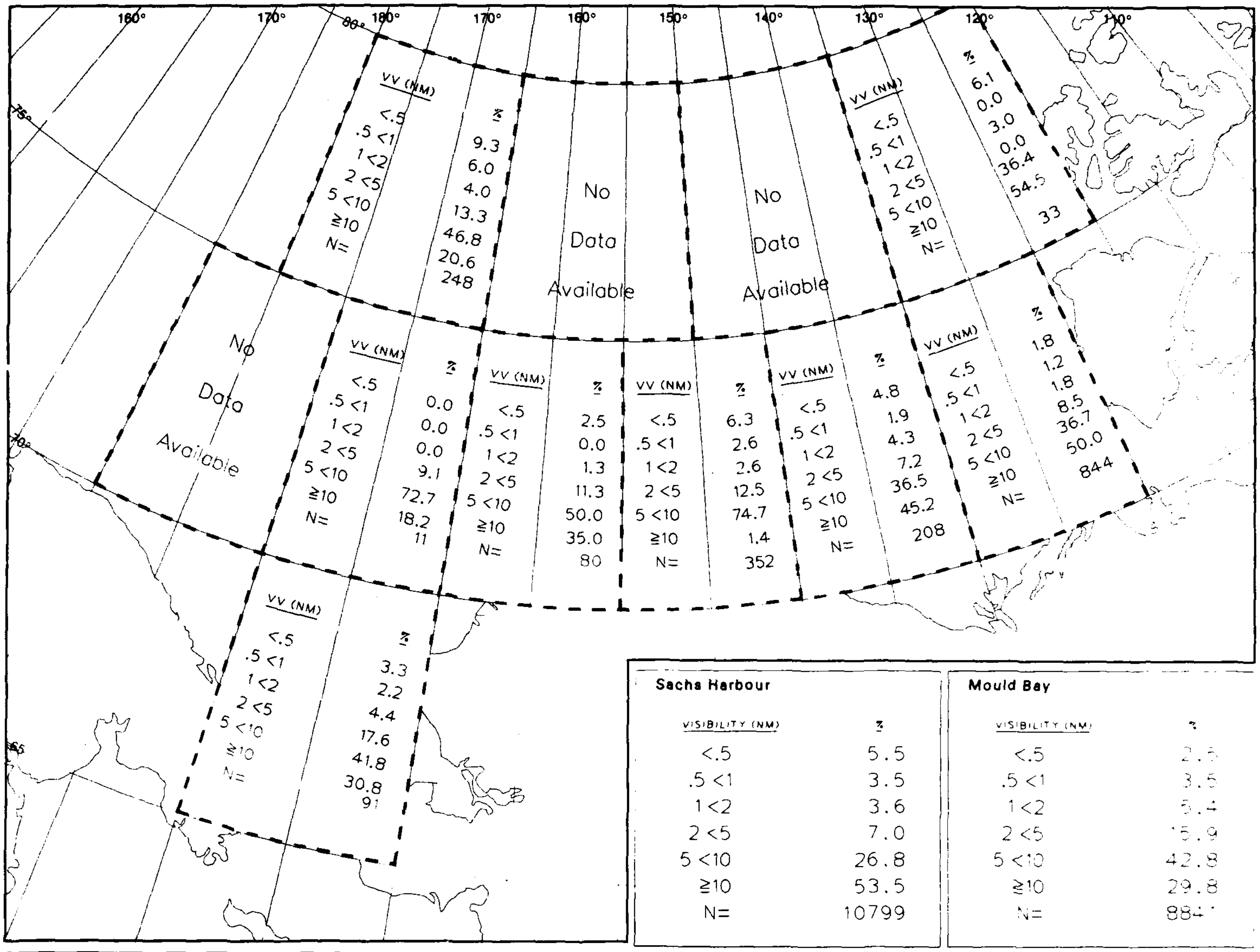
VISIBILITY (NM)	%
<.5	3.9
.5 <1	4.4
1<2	5.0
2 <5	11.5
5 <10	35.2
≧10	40.0
N=	19199

Clinton Point

VISIBILITY (NM)	%
<.5	6.6
.5 <1	4.0
1<2	3.5
2 <5	6.8
5 <10	22.4
≧10	56.7
N=	4340

Holman

VISIBILITY (NM)	%
<.5	7.4
.5 <1	2.9
1<2	3.8
2 <5	7.7
5 <10	23.1
≧10	55.1
N=	3114



Sachs Harbour

VISIBILITY (NM)	%
<.5	5.5
.5 <1	3.5
1 <2	3.6
2 <5	7.0
5 <10	26.8
≥10	53.5
N=	10799

Mould Bay

VISIBILITY (NM)	%
<.5	2.5
.5 <1	3.5
1 <2	5.4
2 <5	15.9
5 <10	42.8
≥10	29.8
N=	884[illegible]

Marine Area A

VISIBILITY (NM)	%
<.5	0.0
.5 <1	0.0
1 <2	0.0
2 <5	6.3
5 <10	62.5
≥10	31.3
N=	16

Marine Area B

VISIBILITY (NM)	%
<.5	5.4
.5 <1	2.0
1 <2	2.7
2 <5	12.9
5 <10	69.8
≥10	7.2
N=	443

Marine Area C

VISIBILITY (NM)	%
<.5	2.4
.5 <1	1.8
1 <2	3.3
2 <5	7.7
5 <10	32.8
≥10	51.9
N=	1688

Marine Area D

VISIBILITY (NM)	%
<.5	4.[illegible]
.5 <1	[illegible]
1 <2	[illegible]
2 <5	[illegible].8
5 <10	4[illegible].6
≥10	31.[illegible]
N=	[illegible]

Ostrov Vrangelja

VISIBILITY (NM)	%
<.5	3.1
.5 <1	3.3
1<2	6.7
2 <5	18.2
5 <10	12.8
≧10	55.9
N=	4195

Mys Shmidte

VISIBILITY (NM)	%
<.5	9.3
.5 <1	9.1
1<2	8.9
2 <5	12.8
5 <10	18.1
≧10	41.8
N=	4447

Ostrov Kolychino

VISIBILITY (NM)	%
<.5	1.4
.5 <1	1.5
1<2	5.5
2 <5	10.1
5 <10	55.9
≧10	25.6
N=	2603

Mys Uelen

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	2.3
1<2	[illegible]
2 <5	16.7
5 <10	[illegible]
≧10	[illegible]
N=	[illegible]

Tin City

VISIBILITY (NM)	%
<.5	12.5
.5 <1	8.2
1<2	12.0
2 <5	16.6
5 <10	29.7
≧10	20.9
N=	19232

Kotzebue

VISIBILITY (NM)	%
<.5	3.5
.5 <1	2.8
1<2	4.0
2 <5	7.6
5 <10	26.4
≧10	55.7
N=	21785

Cape Lisburne

VISIBILITY (NM)	%
<.5	2.5
.5 <1	3.8
1<2	5.2
2 <5	13.7
5 <10	54.3
≧10	20.5
N=	19370

Point Lay

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	[illegible]
1<2	[illegible]
2 <5	[illegible]
5 <10	[illegible]
≧10	[illegible]
N=	[illegible]

Barrow

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	3.7
1<2	4.4
2 <5	12.4
5 <10	[illegible]
≧10	14.2
N=	[illegible]

Lonely

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	[illegible]
1<2	3.5
2 <5	[illegible]
5 <10	[illegible]
≧10	20.8
N=	3476

Oliktok

VISIBILITY (NM)	%
<.5	5.0
.5 <1	4.3
1<2	4.5
2 <5	8.3
5 <10	56.0
≧10	22.0
N=	3344

Barter

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	4.4
1<2	[illegible]
2 <5	[illegible]
5 <10	[illegible]
≧10	[illegible]
N=	[illegible]

Tuktoyaktuk

VISIBILITY (NM)	%
<.5	4.4
.5 <1	[illegible]
1<2	[illegible]
2 <5	6.9
5 <10	27.6
≧10	[illegible]
N=	[illegible]

Cape Parry

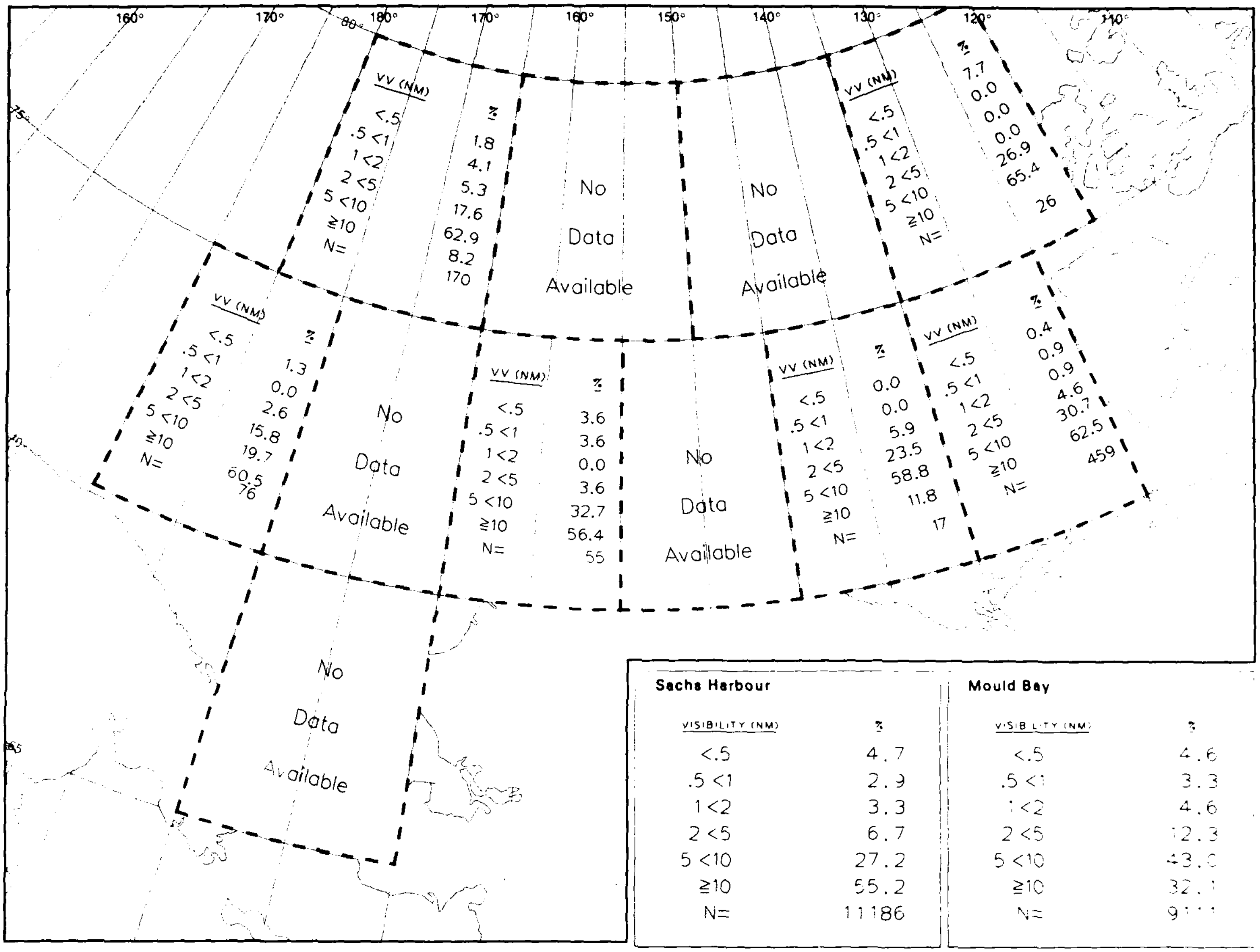
VISIBILITY (NM)	%
<.5	3.3
.5 <1	4.1
1<2	4.8
2 <5	[illegible]
5 <10	35.9
≧10	40.8
N=	19790

Clinton Point

VISIBILITY (NM)	%
<.5	6.9
.5 <1	3.7
1<2	2.6
2 <5	5.5
5 <10	[illegible]
≧10	[illegible]
N=	[illegible]

Holman

VISIBILITY (NM)	%
<.5	[illegible]
.5 <1	[illegible]
1<2	[illegible]
2 <5	[illegible]
5 <10	[illegible]
≧10	[illegible]
N=	[illegible]



Sachs Harbour

VISIBILITY (NM)	%
<.5	4.7
.5 <1	2.9
1 <2	3.3
2 <5	6.7
5 <10	27.2
≥10	55.2
N=	11186

Mould Bay

VISIBILITY (NM)	%
<.5	4.6
.5 <1	3.3
1 <2	4.6
2 <5	12.3
5 <10	43.0
≥10	32.1
N=	9[illegible]

Marine Area A

VISIBILITY (NM)	%
<.5	1.6
.5 <1	0.0
1 <2	1.6
2 <5	17.7
5 <10	11.3
≥10	67.7
N=	62

Marine Area B

VISIBILITY (NM)	%
<.5	3.5
.5 <1	3.5
1 <2	3.5
2 <5	3.5
5 <10	31.6
≥10	54.4
N=	57

Marine Area C

VISIBILITY (NM)	%
<.5	1.8
.5 <1	1.5
1 <2	1.9
2 <5	9.7
5 <10	29.0
≥10	56.1
N=	620

Marine Area D

VISIBILITY (NM)	%
<.5	6.7
.5 <1	13.3
1 <2	[illegible]
2 <5	6.7
5 <10	53.3
≥10	20.0
N=	15

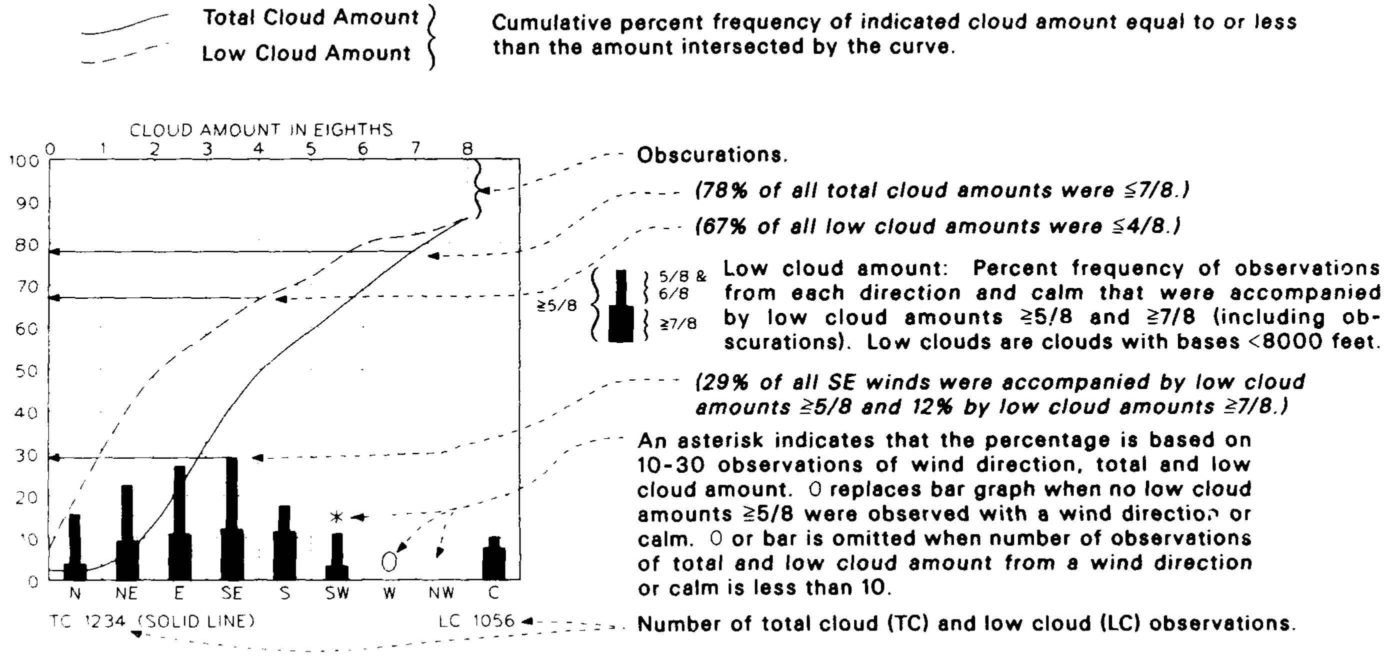
Map 6. Cloud amount

BLACK LINE – Percent frequency of total cloud amount ≦2/8.

BLUE LINE – Percent frequency of low cloud amount ≧5/8.

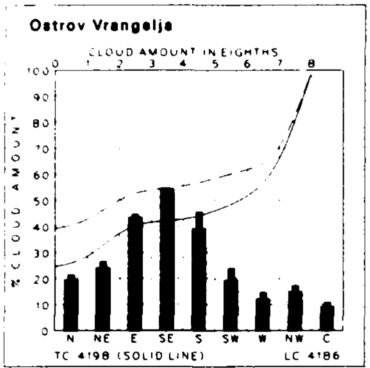
Albers Equal–Area Conic Projection

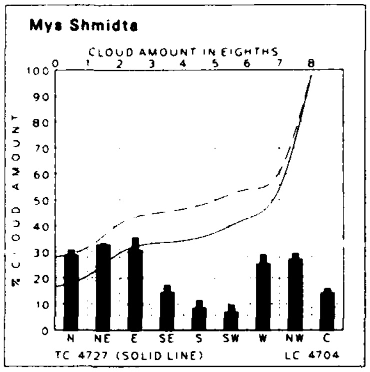
Graphs: Cloud cover/wind direction

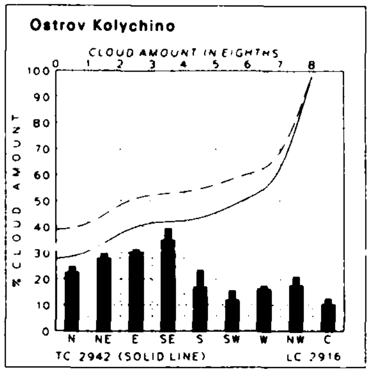


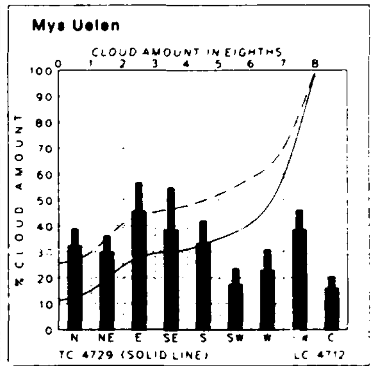
A survey of the cloud data (total and low cloud amounts) from the marine data base shows the number of total cloud reports significantly greater than that of low cloud amounts. This is because many of the early marine observations contain only total cloud amounts. Therefore, somewhat different samples may be used to compute the two curves on the graph. This may lead to inconsistencies where the low cloud amount appears higher than the total cloud amount. Where this occurred, the graph was adjusted in favor of the total cloud by making the curves coincide. The frequency of obscured conditions may be determined from the graph by subtracting the cumulative percent frequency on the curve corresponding to 8/8 coverage from 100%. In computing the bar graph, obscurations are considered as 8/8 coverage.

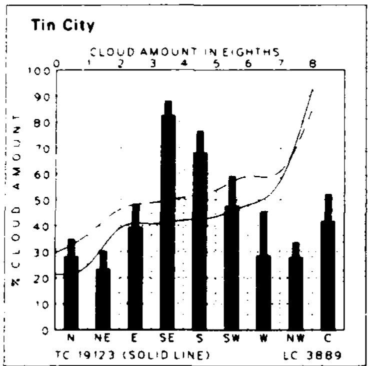
For the two isopleth presentations (total cloud amount ≤2/8 and low cloud amount ≥5/8), only those observations reporting both total and low cloud amounts were summarized. This helps eliminate problems introduced as a result of different size data sets. A comparison of total cloud analyses based on satellite data by the U.S. Department of Commerce and U.S. Air Force (1971) shows a fairly close agreement with, and bolsters the confidence in, the marine cloud statistics presented in this atlas. Refer to the texts in Sets 3 and 4 for additional information on clouds.

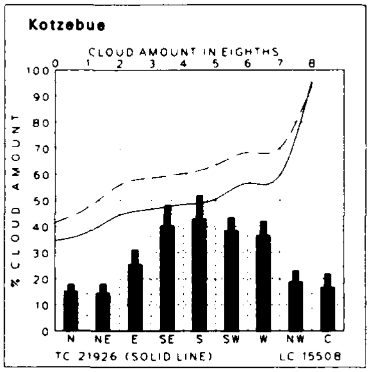

Ostrov Vrangelja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4198 (SOLID LINE)
LC 4186

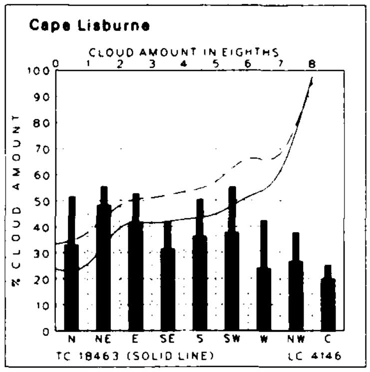

Mys Shmidta
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4727 (SOLID LINE)
LC 4704

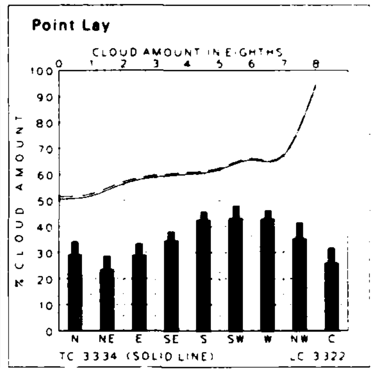

Ostrov Kolychino
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2942 (SOLID LINE)
LC 2916

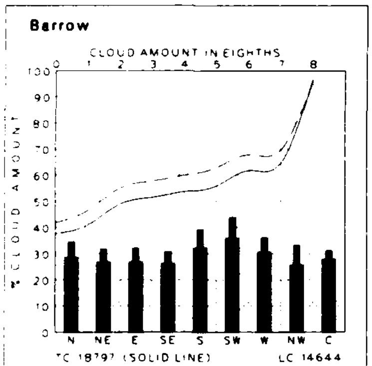

Mys Uelen
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4729 (SOLID LINE)
LC 4712

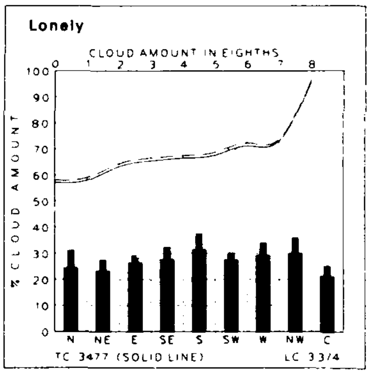

Tin City
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19123 (SOLID LINE)
LC 3889

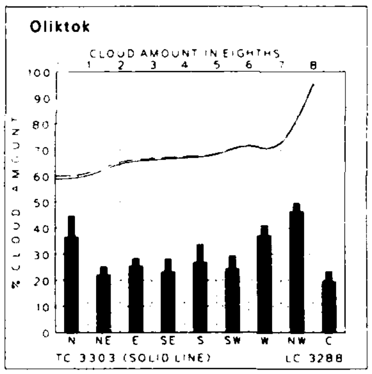

Kotzebue
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 21926 (SOLID LINE)
LC 15508

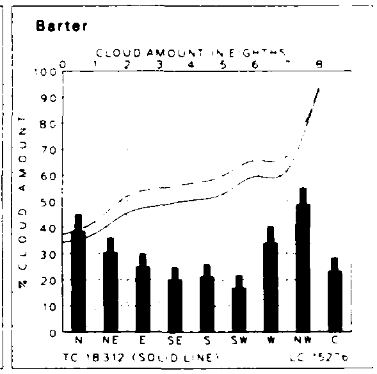

Cape Lisburne
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 18463 (SOLID LINE)
LC 4146

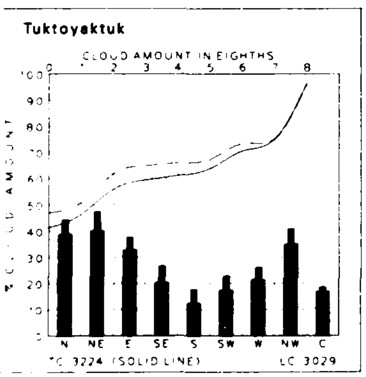

Point Lay
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3334 (SOLID LINE)
LC 3322

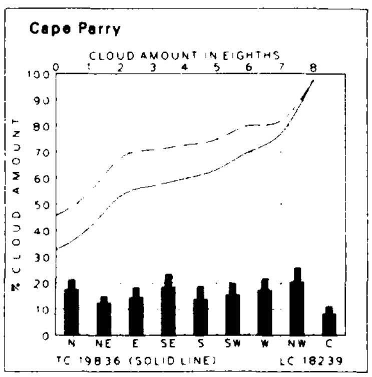

Barrow
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 18797 (SOLID LINE)
LC 14644

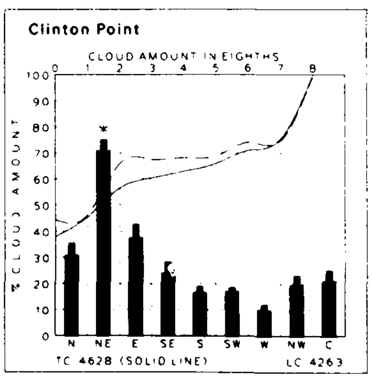

Lonely
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3477 (SOLID LINE)
LC 3374

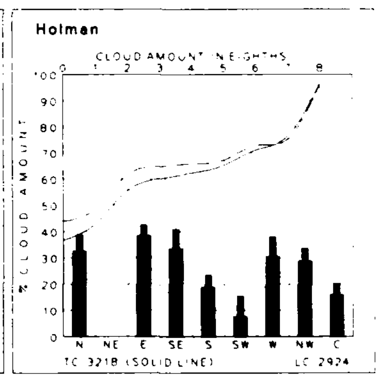

Oliktok
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3303 (SOLID LINE)
LC 3288

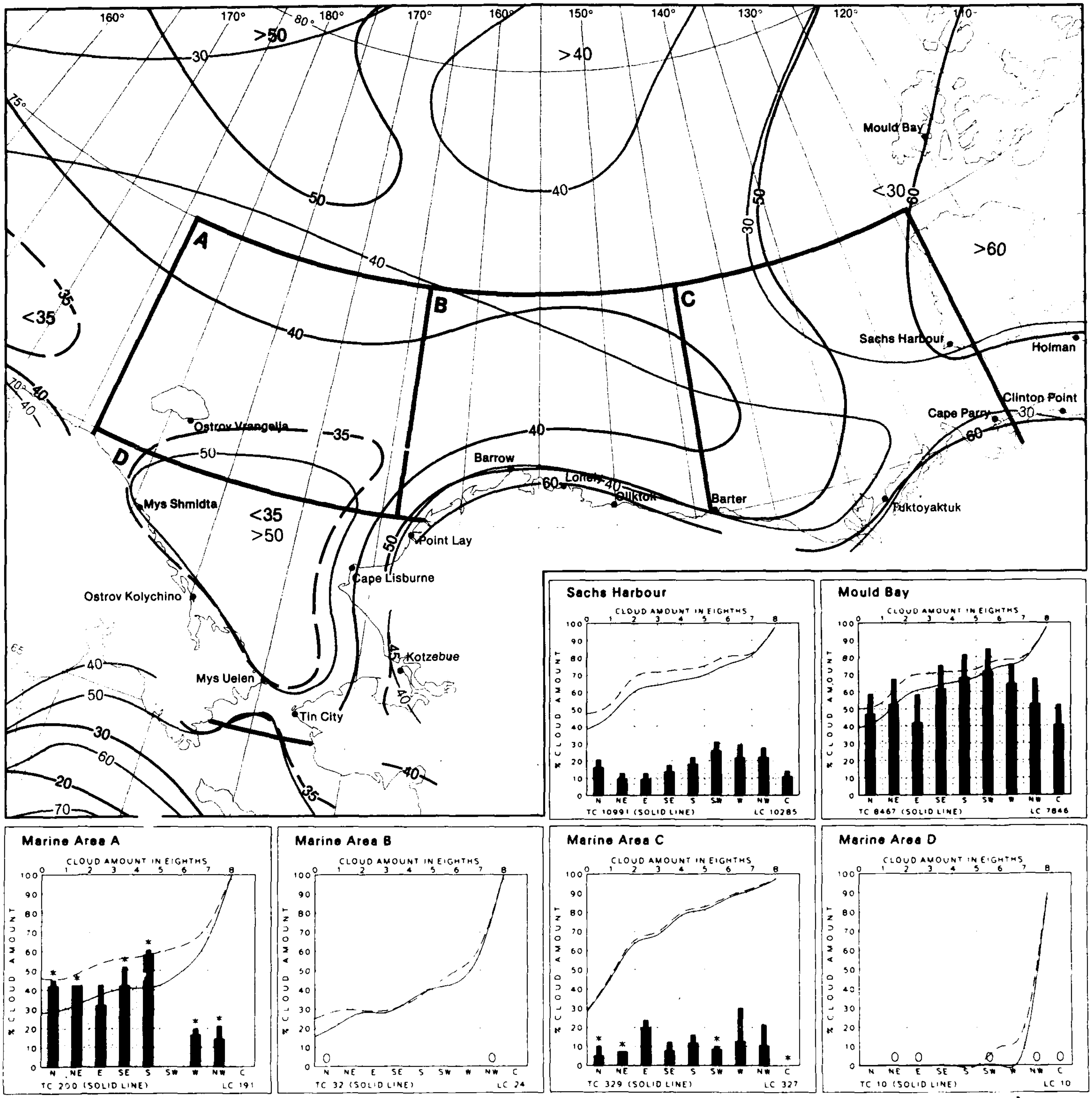

Barter
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 18312 (SOLID LINE)
LC 15276


Tuktoyaktuk
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3224 (SOLID LINE)
LC 3029

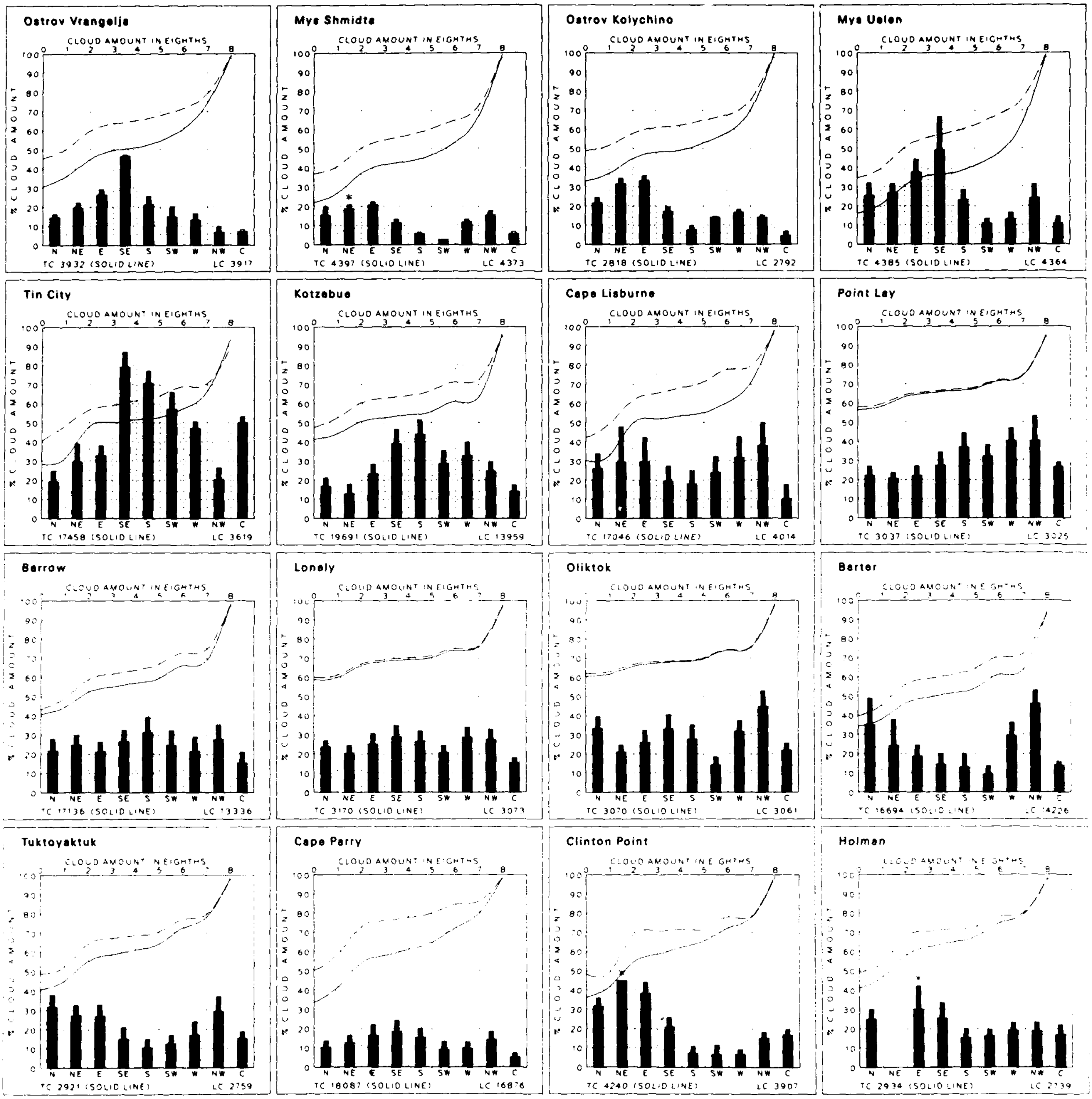

Cape Parry
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19836 (SOLID LINE)
LC 18239

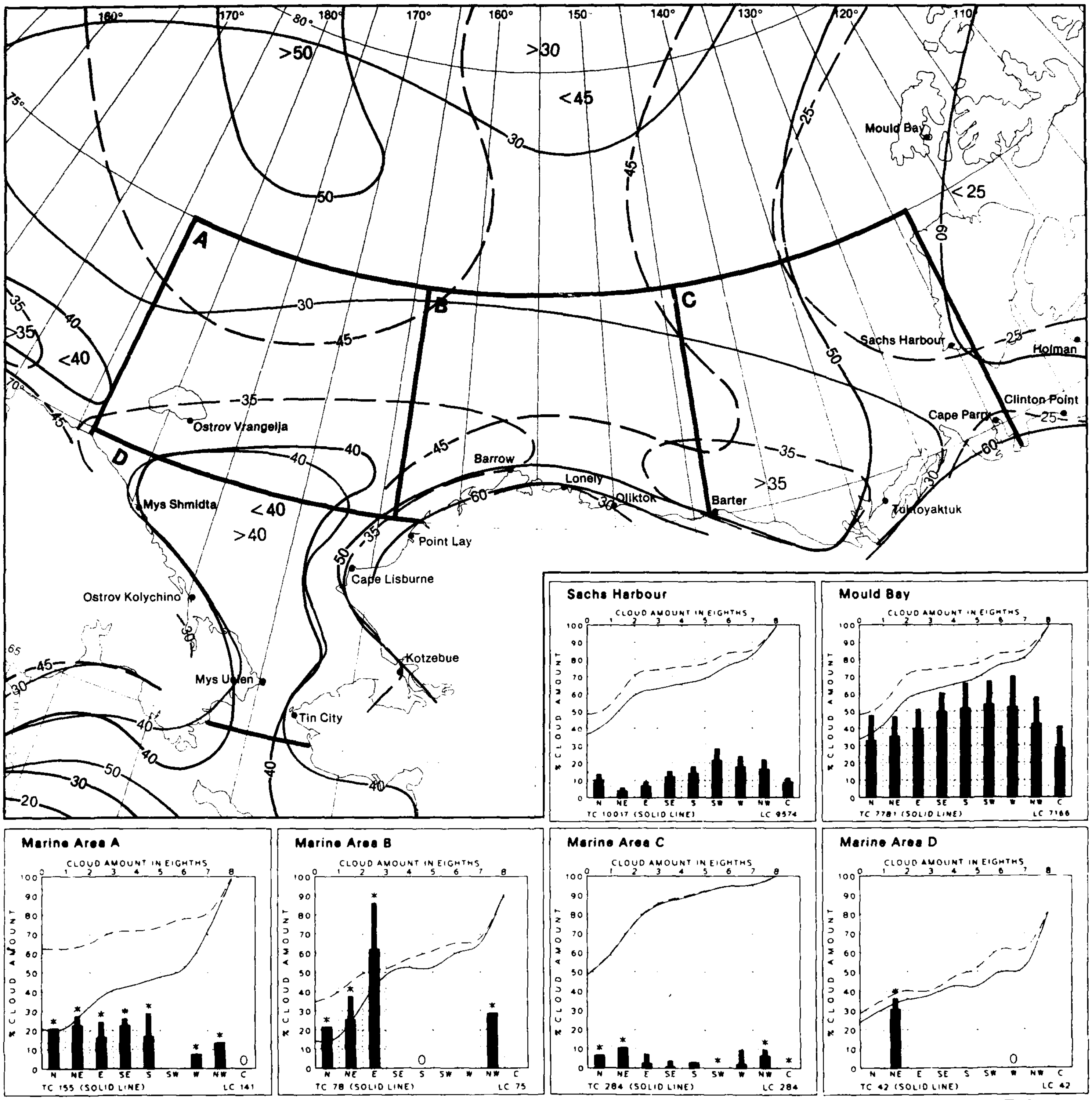

Clinton Point
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4628 (SOLID LINE)
LC 4263


Holman
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3218 (SOLID LINE)
LC 2924



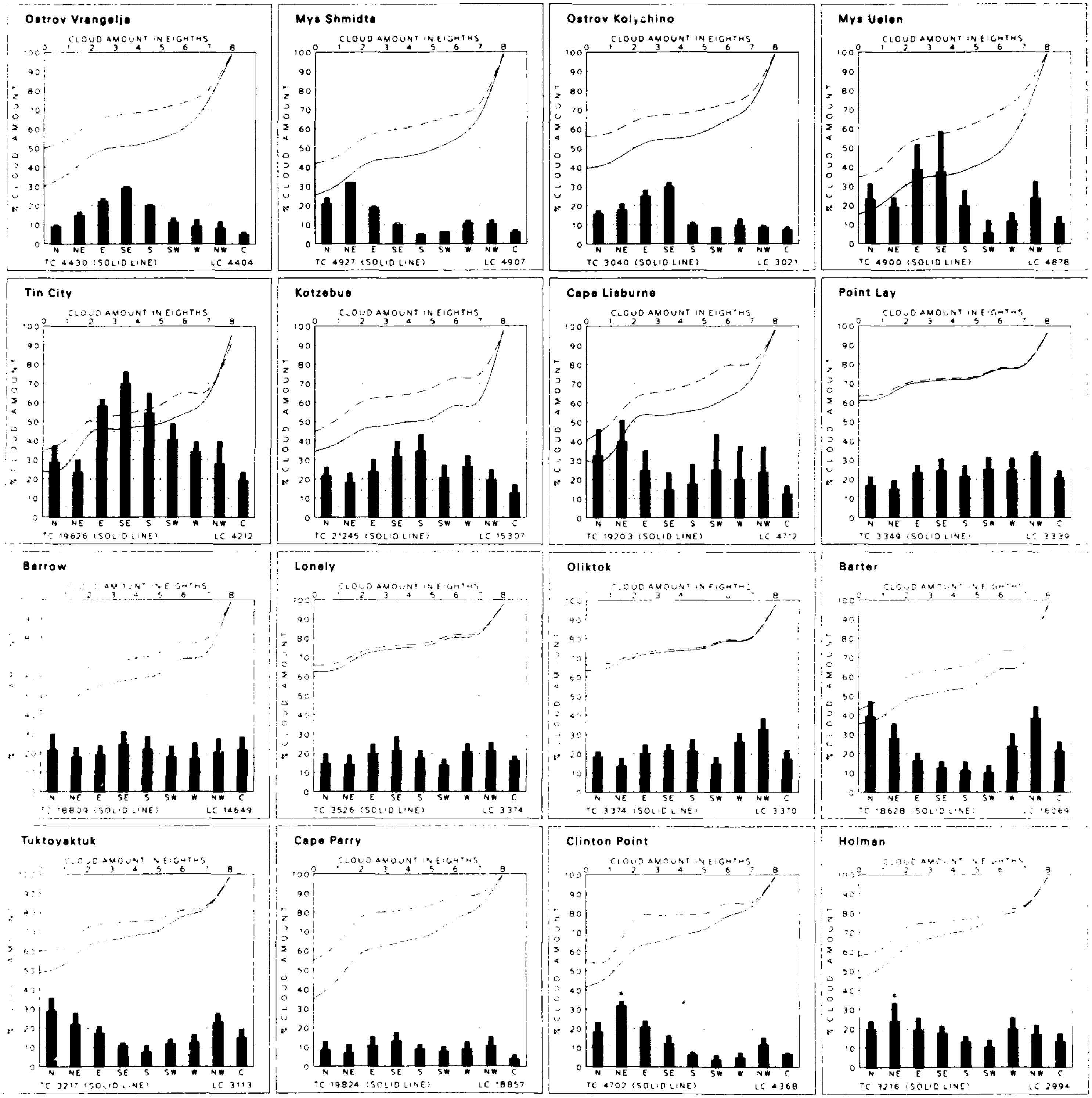
A
B
C
D
Mould Bay
Sachs Harbour
Holman
Clinton Point
Cape Parry
Tuktoyaktuk
Barter
Oliktok
Lonely
Barrow
Point Lay
Cape Lisburne
Kotzebue
Tin City
Mys Uelen
Ostrov Kolychino
Mys Shmidta
Ostrov Vrangelja
>50
>40
<30
>60
<35
<35
>50
Sachs Harbour
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 10991 (SOLID LINE) LC 10285
Mould Bay
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 8467 (SOLID LINE) LC 7846
Marine Area A
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 200 (SOLID LINE) LC 191
Marine Area B
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 32 (SOLID LINE) LC 24
Marine Area C
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 329 (SOLID LINE) LC 327
Marine Area D
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 10 (SOLID LINE) LC 10
N NE E SE S SW W NW C

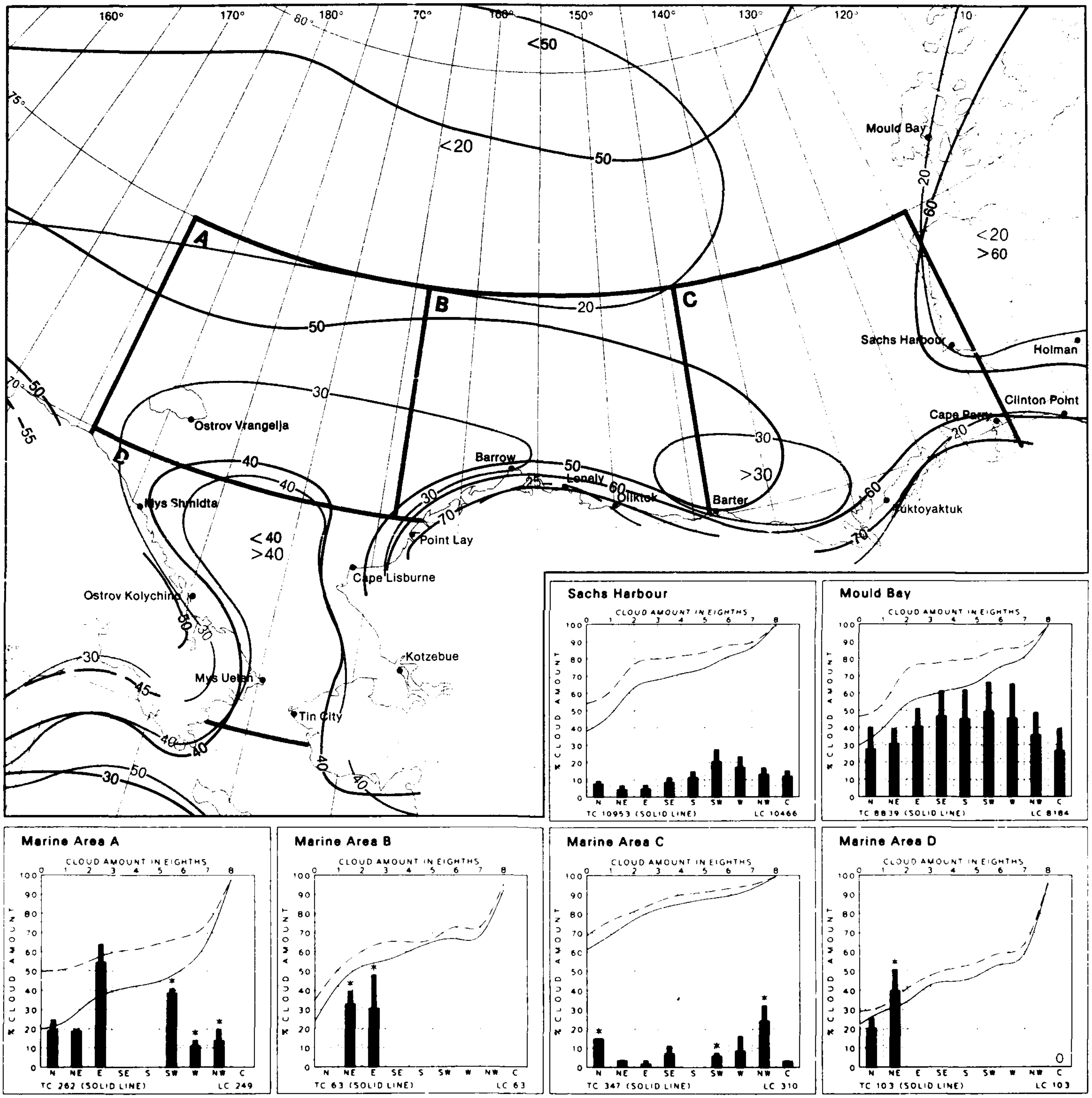

Ostrov Vrangelja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3932 (SOLID LINE) LC 3917
Mys Shmidta
TC 4397 (SOLID LINE) LC 4373
Ostrov Kolychino
TC 2818 (SOLID LINE) LC 2792
Mys Uelen
TC 4385 (SOLID LINE) LC 4364
Tin City
TC 17458 (SOLID LINE) LC 3619
Kotzebue
TC 19691 (SOLID LINE) LC 13959
Cape Lisburne
TC 17046 (SOLID LINE) LC 4014
Point Lay
TC 3037 (SOLID LINE) LC 3025
Barrow
TC 17136 (SOLID LINE) LC 13336
Lonely
TC 3170 (SOLID LINE) LC 3073
Oliktok
TC 3070 (SOLID LINE) LC 3061
Barter
TC 16694 (SOLID LINE) LC 14226
Tuktoyaktuk
TC 2921 (SOLID LINE) LC 2759
Cape Parry
TC 18087 (SOLID LINE) LC 16876
Clinton Point
TC 4240 (SOLID LINE) LC 3907
Holman
TC 2934 (SOLID LINE)



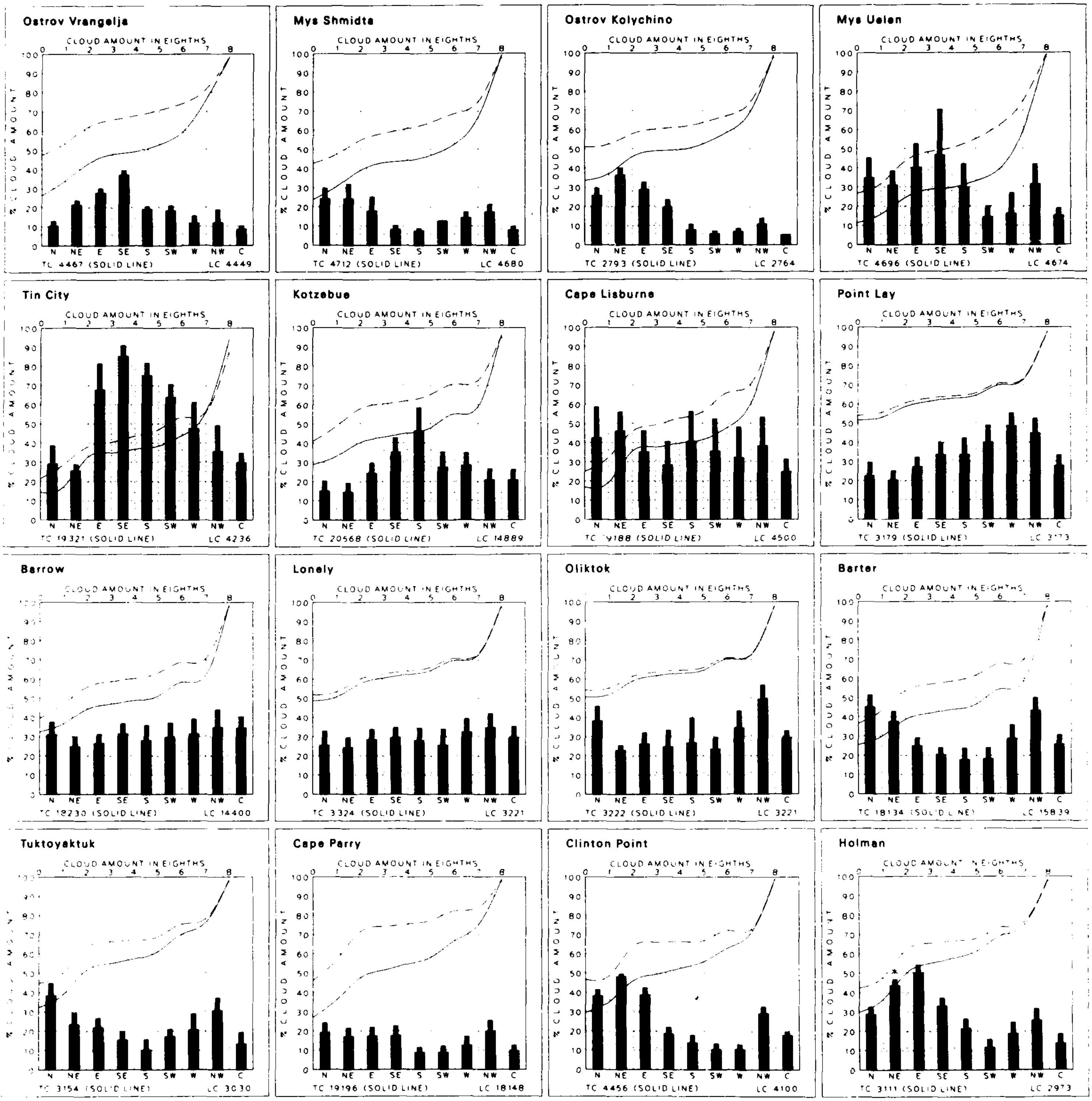
6 Clouds ≦2/8 and ≧5/8

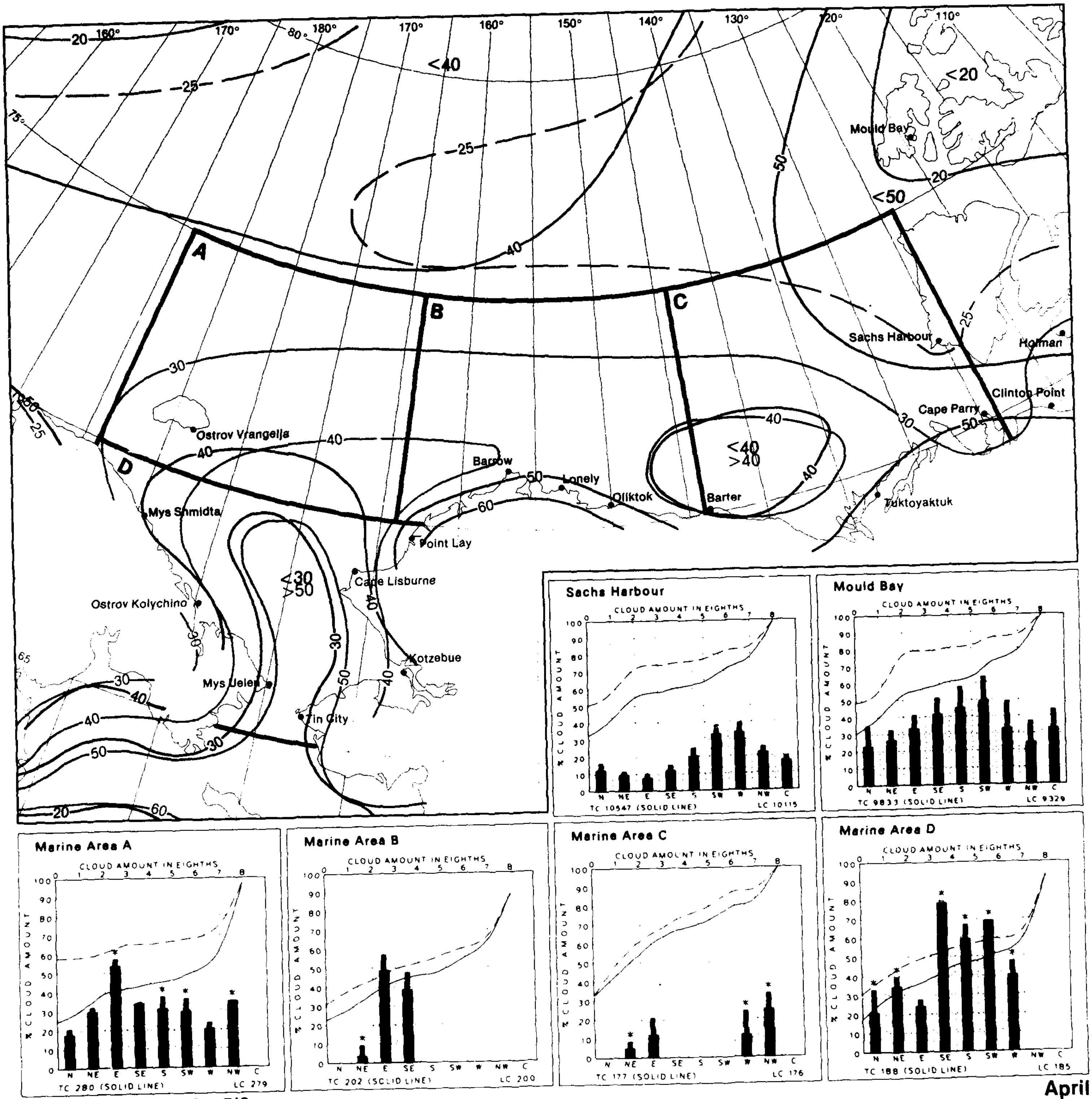
February


Ostrov Vrangelja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 4430 (SOLID LINE) LC 4404
Mys Shmidta
TC 4927 (SOLID LINE) LC 4907
Ostrov Kolyuchino
TC 3040 (SOLID LINE) LC 3021
Mys Uelen
TC 4900 (SOLID LINE) LC 4878
Tin City
TC 19626 (SOLID LINE) LC 4212
Kotzebue
TC 21245 (SOLID LINE) LC 15307
Cape Lisburne
TC 19203 (SOLID LINE) LC 4712
Point Lay
TC 3349 (SOLID LINE) LC 3339
Barrow
TC 18809 (SOLID LINE) LC 14649
Lonely
TC 3526 (SOLID LINE) LC 3374
Oliktok
TC 3374 (SOLID LINE) LC 3370
Barter
TC 18628 (SOLID LINE) LC 16069
Tuktoyaktuk
TC 3217 (SOLID LINE) LC 3113
Cape Parry
TC 19824 (SOLID LINE) LC 18857
Clinton Point
TC 4702 (SOLID LINE) LC 4368
Holman
TC 3216 (SOLID LINE) LC 2994
N NE E SE S SW W NW C



6 Clouds ≦2/8 and ≧5/8 **March**

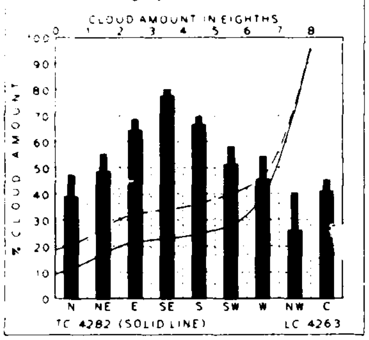

Ostrov Vrangelja
TC 4467 (SOLID LINE) LC 4449
Mys Shmidta
TC 4712 (SOLID LINE) LC 4680
Ostrov Kolychino
TC 2793 (SOLID LINE) LC 2764
Mys Uelen
TC 4696 (SOLID LINE) LC 4674
Tin City
TC 19321 (SOLID LINE) LC 4236
Kotzebue
TC 20568 (SOLID LINE) LC 14889
Cape Lisburne
LC 4500
Point Lay
TC 3179 (SOLID LINE)
Barrow
TC 18230 (SOLID LINE) LC 14400
Lonely
TC 3324 (SOLID LINE) LC 3221
Oliktok
TC 3222 (SOLID LINE) LC 3221
Barter
TC 18134 (SOLID LINE) LC 15839
Tuktoyaktuk
TC 3154 (SOLID LINE) LC 3030
Cape Parry
TC 19196 (SOLID LINE) LC 18148
Clinton Point
TC 4456 (SOLID LINE) LC 4100
Holman
TC 3111 (SOLID LINE) LC 2973
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C



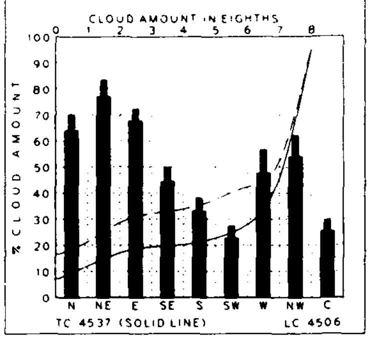
April

6 Clouds ≦2/8 and ≧5/8

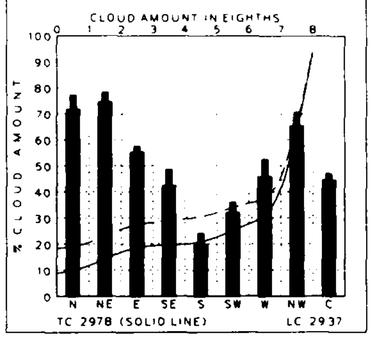
Ostrov Vrangelja



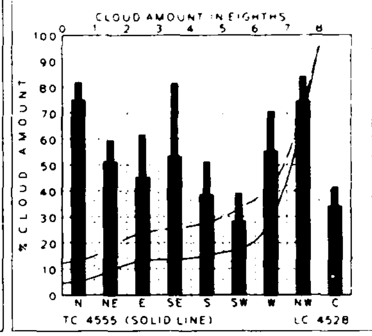
Mys Shmidta



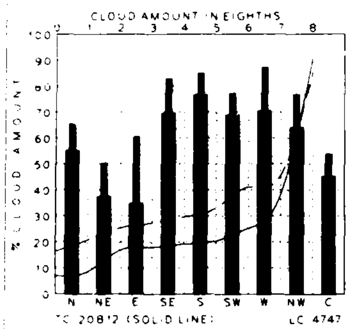
Ostrov Kolychino



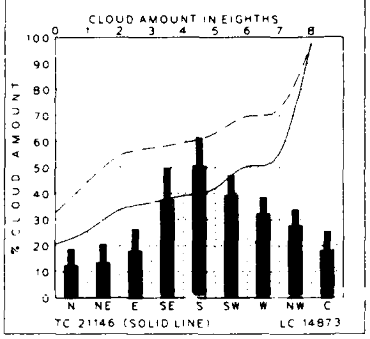
Mys Uelen



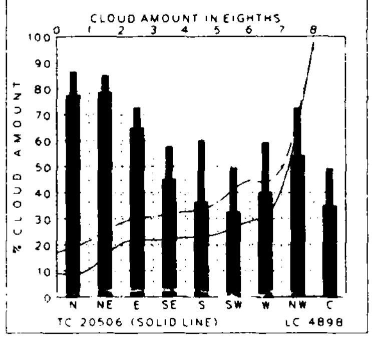
Tin City



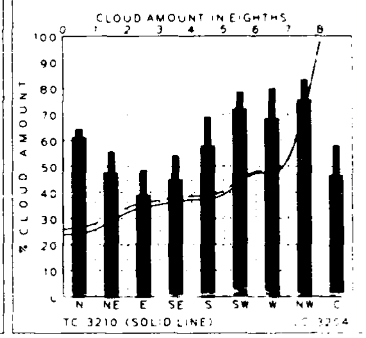
Kotzebue



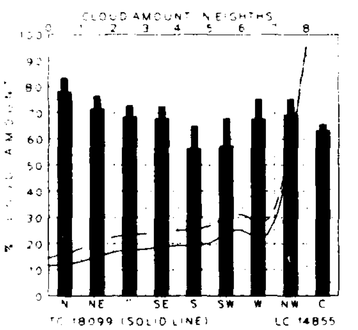
Cape Lisburne



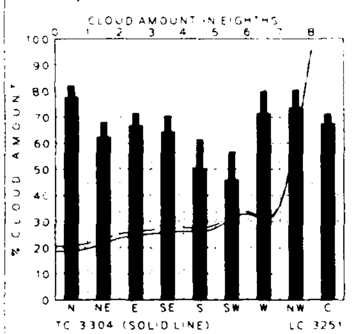
Point Lay



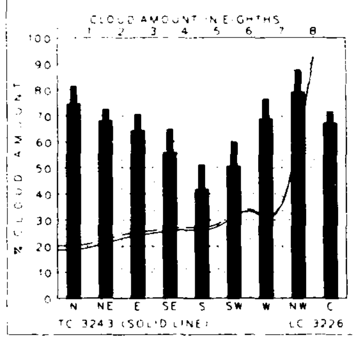
Barrow



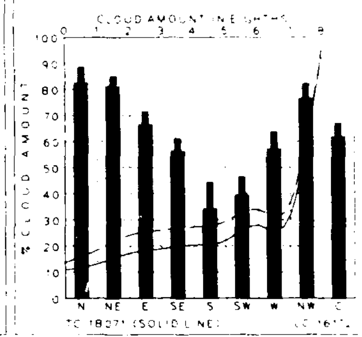
Lonely



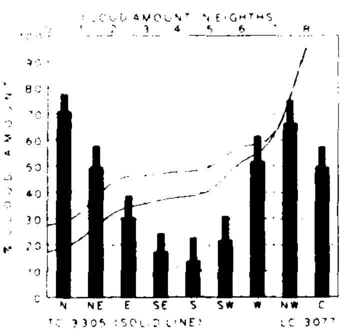
Oliktok



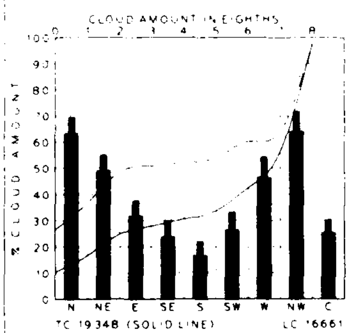
Barter



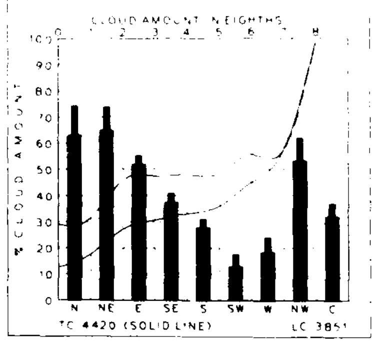
Tuktoyaktuk



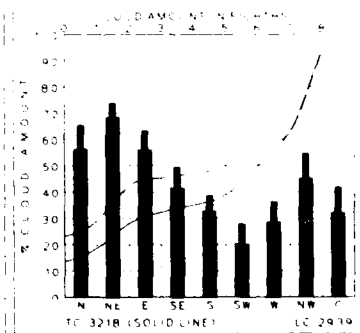
Cape Parry

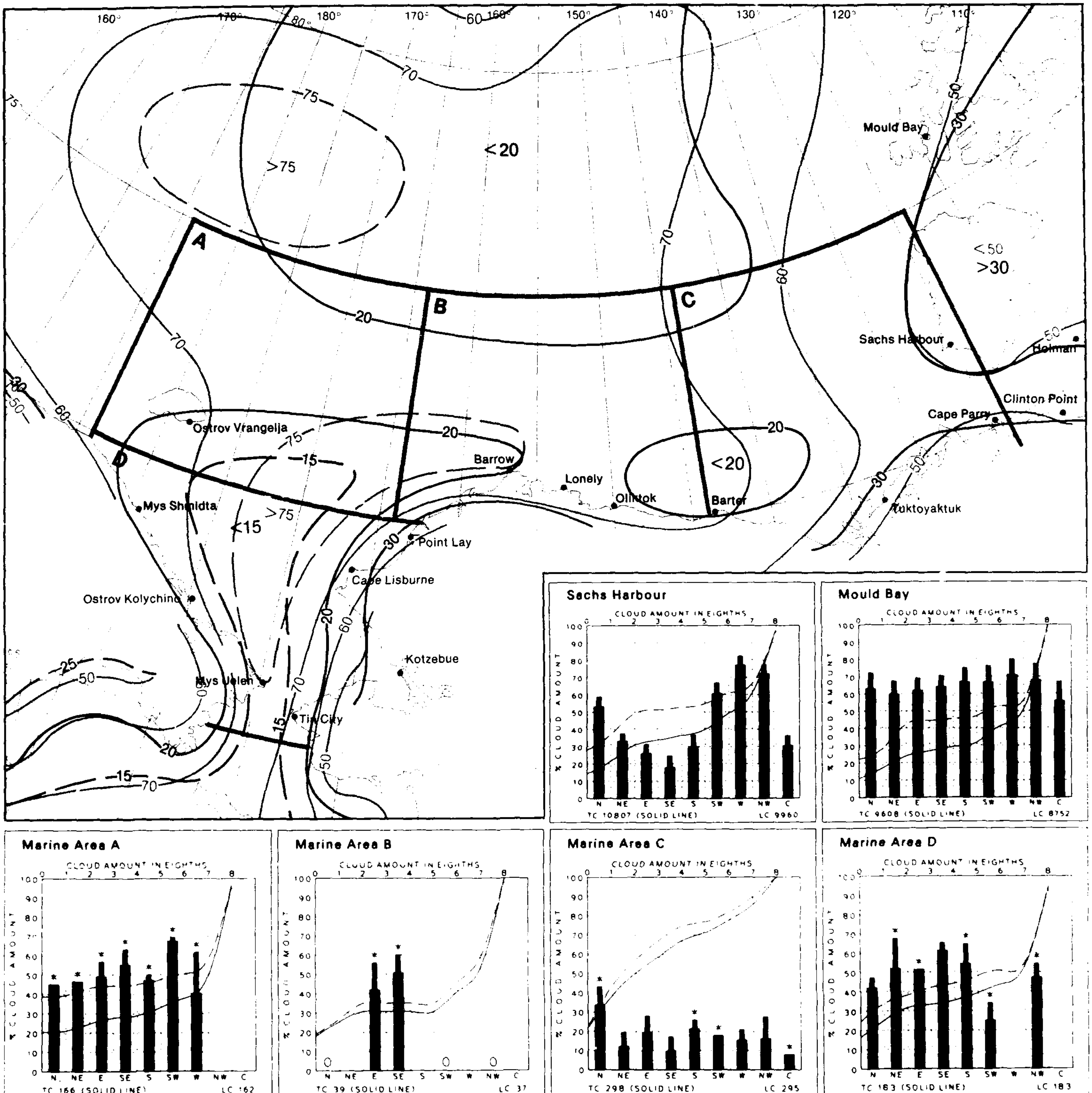


Clinton Point

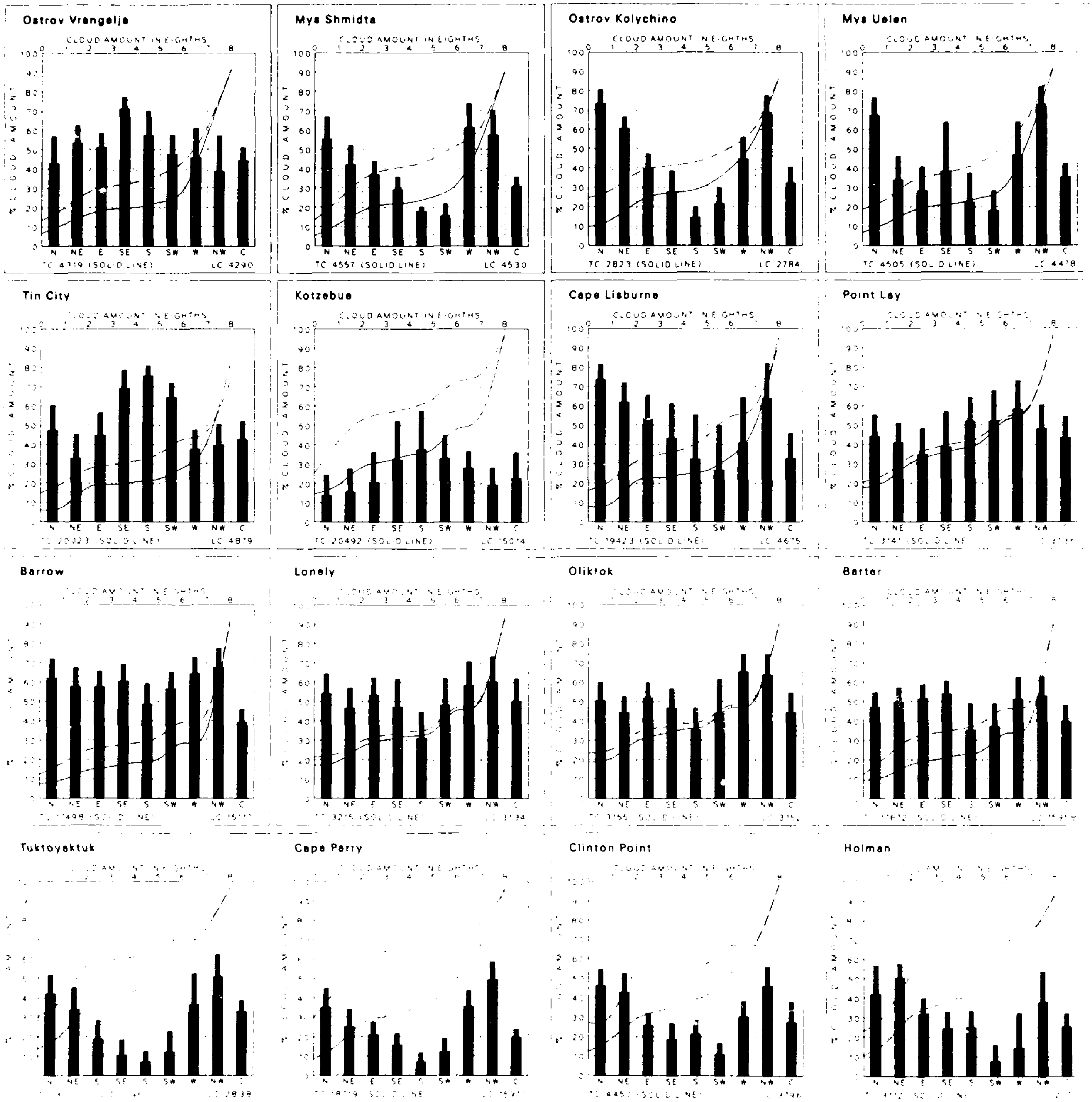


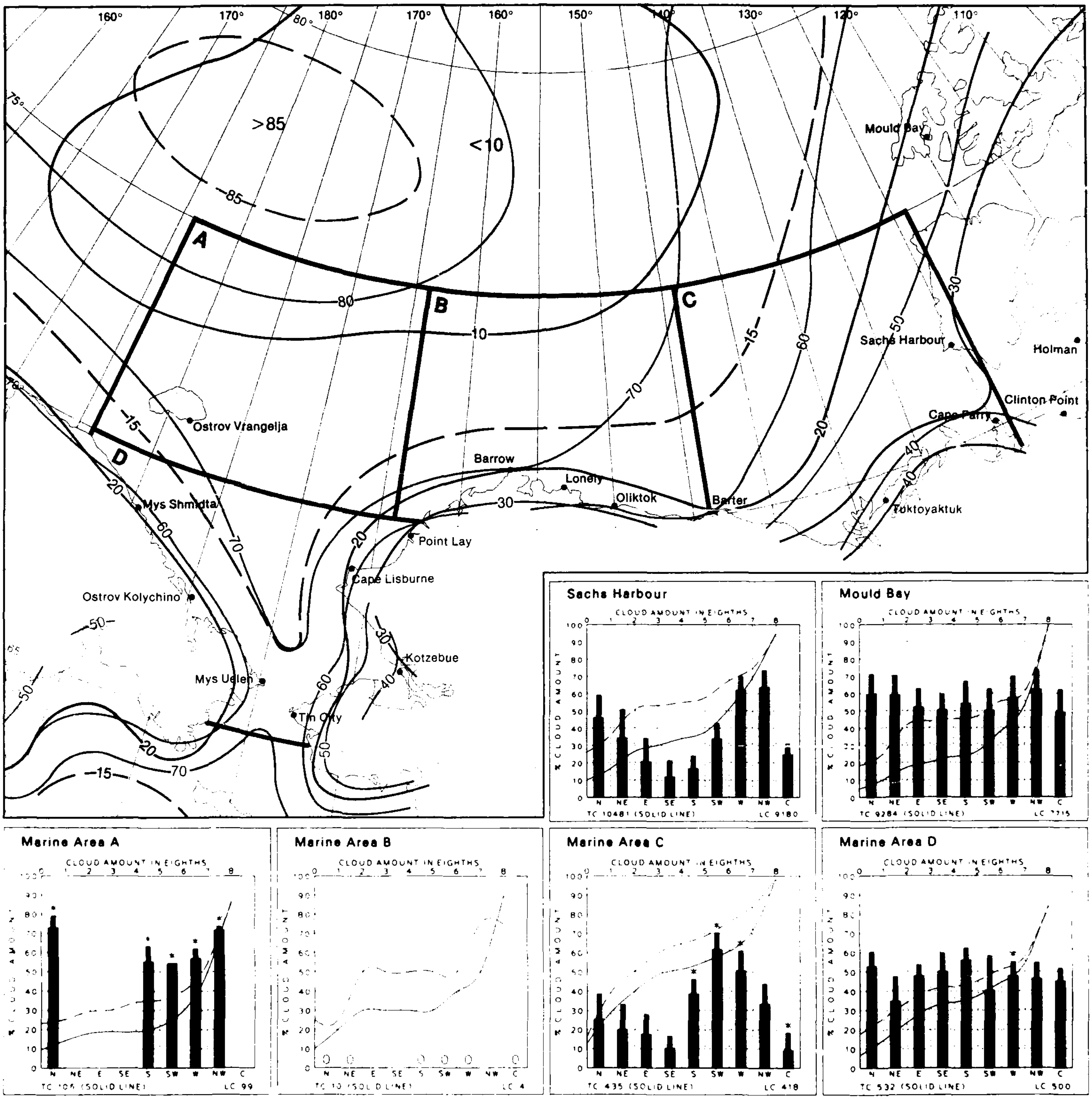
Holman





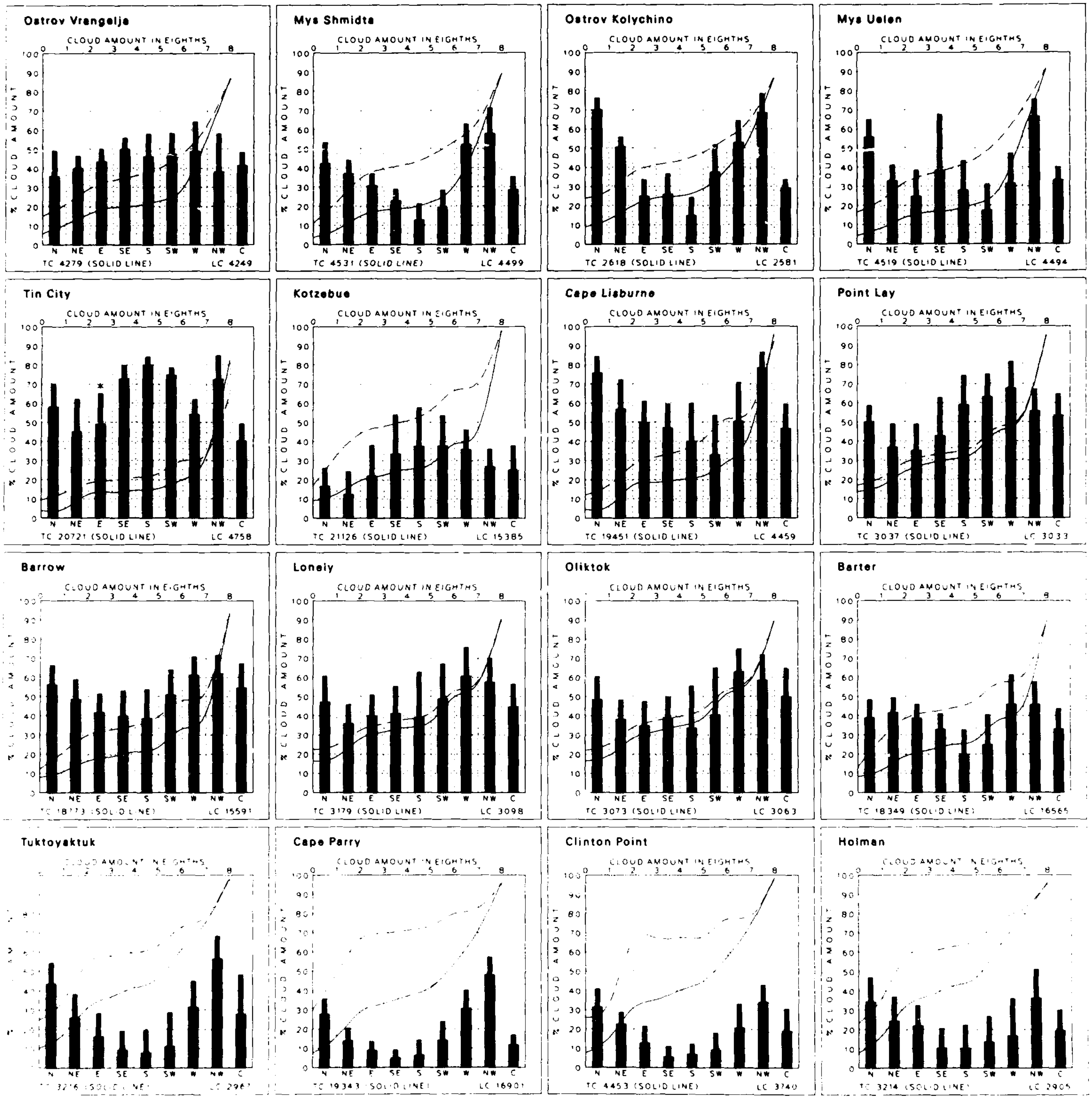
6 Clouds ≦2/8 and ≧5/8


Ostrov Vrangelja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 4319 (SOLID LINE)
LC 4290
Mys Shmidta
TC 4557 (SOLID LINE)
LC 4530
Ostrov Kolychino
TC 2823 (SOLID LINE)
LC 2784
Mys Uelen
TC 4505 (SOLID LINE)
Tin City
LC 4879
Kotzebue
TC 20492 (SOLID LINE)
Cape Lisburne
TC 19423 (SOLID LINE)
LC 4675
Point Lay
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
Holman
N NE E SE S SW W NW C



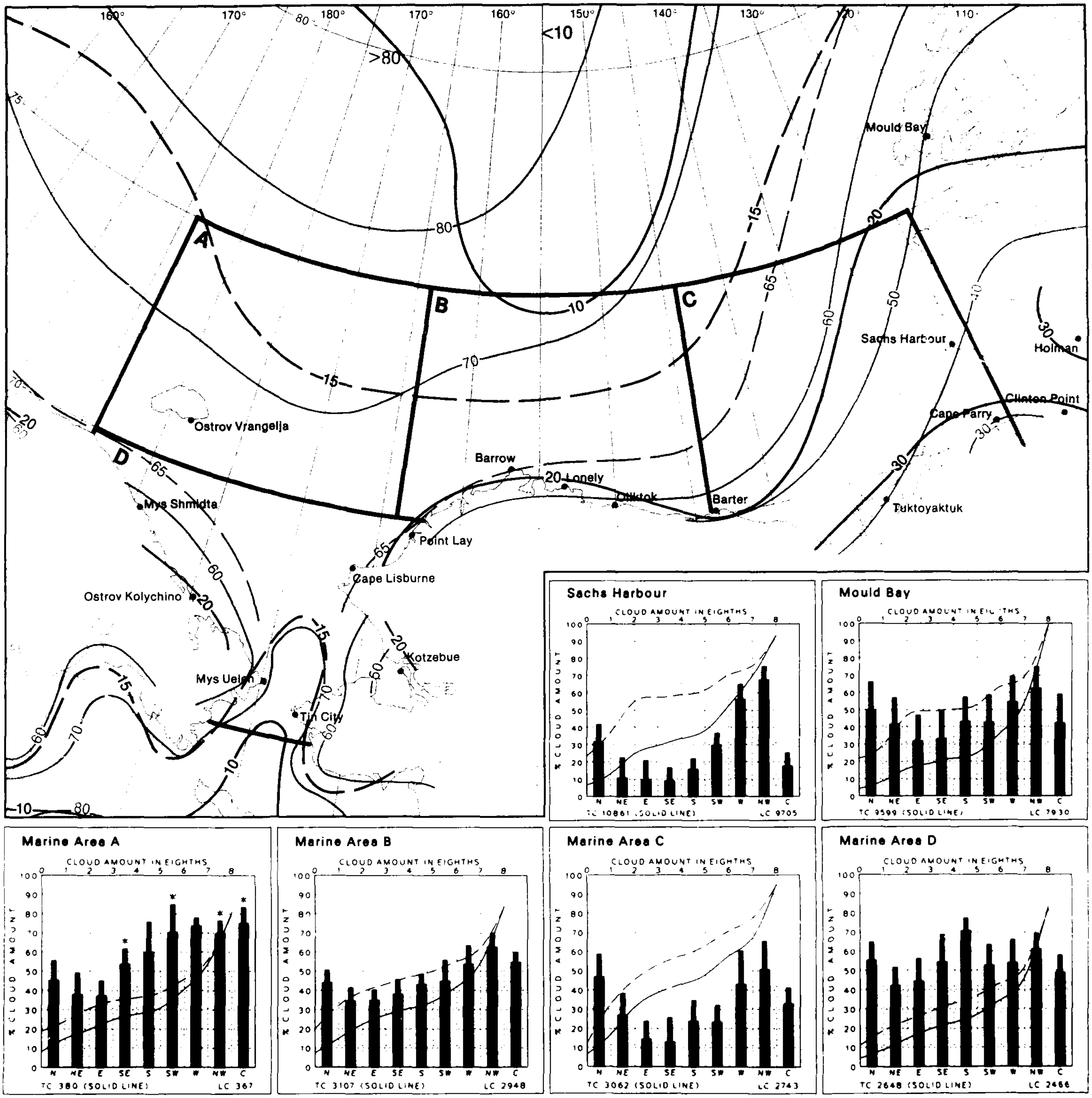
6 Clouds ≦2/8 and ≧5/8

June

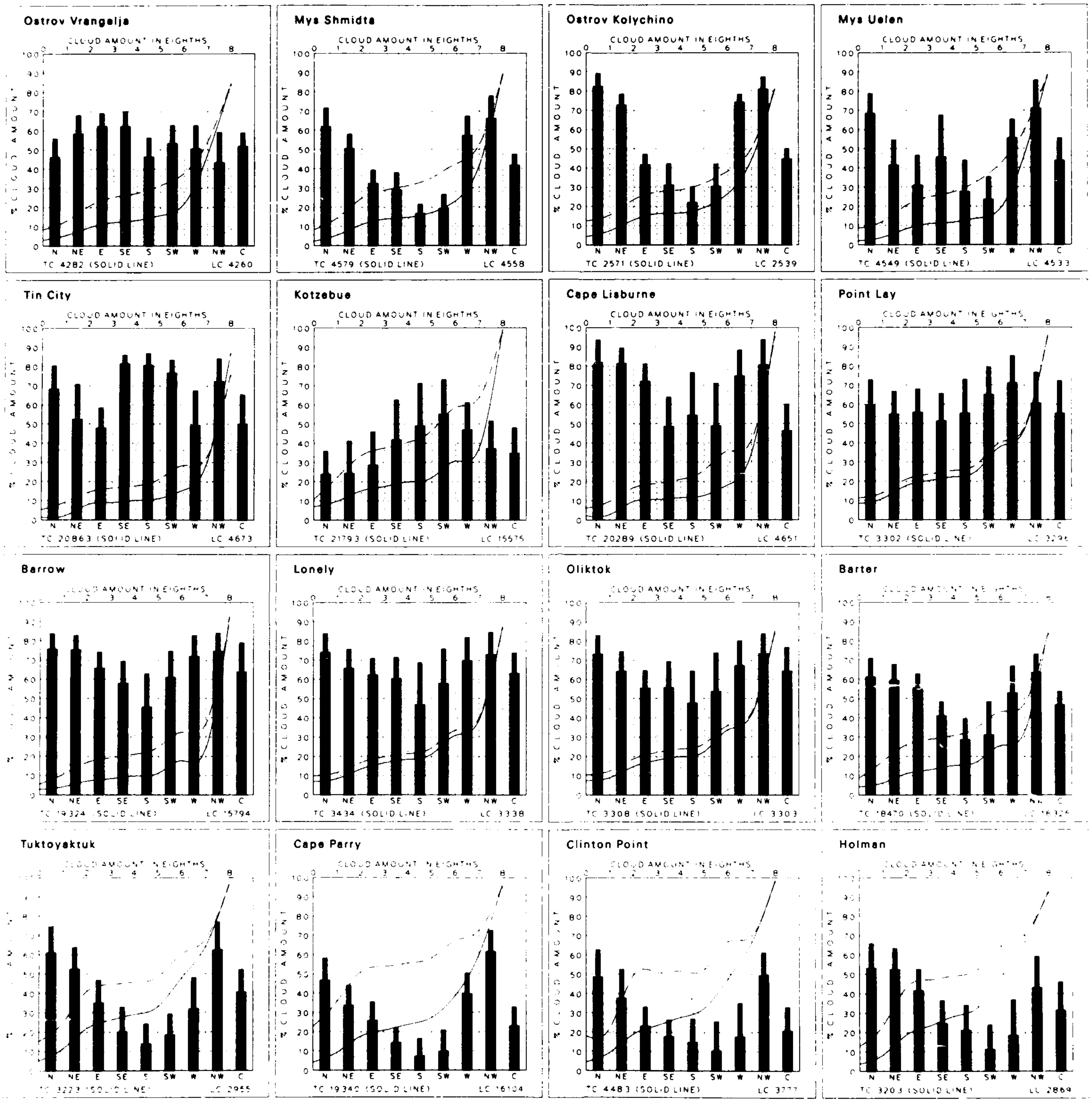


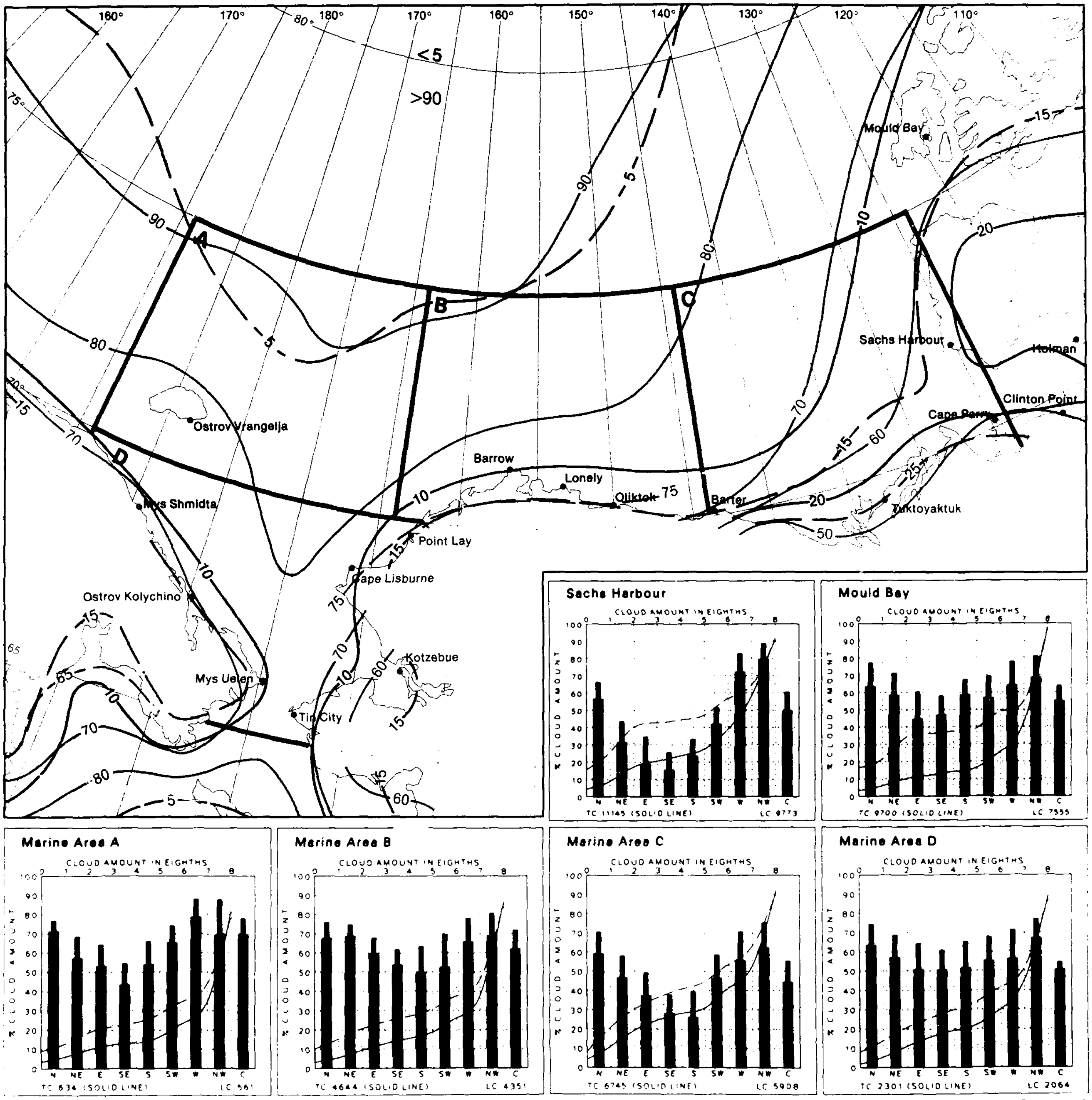
July

6 Cloud Cover and Wind Direction



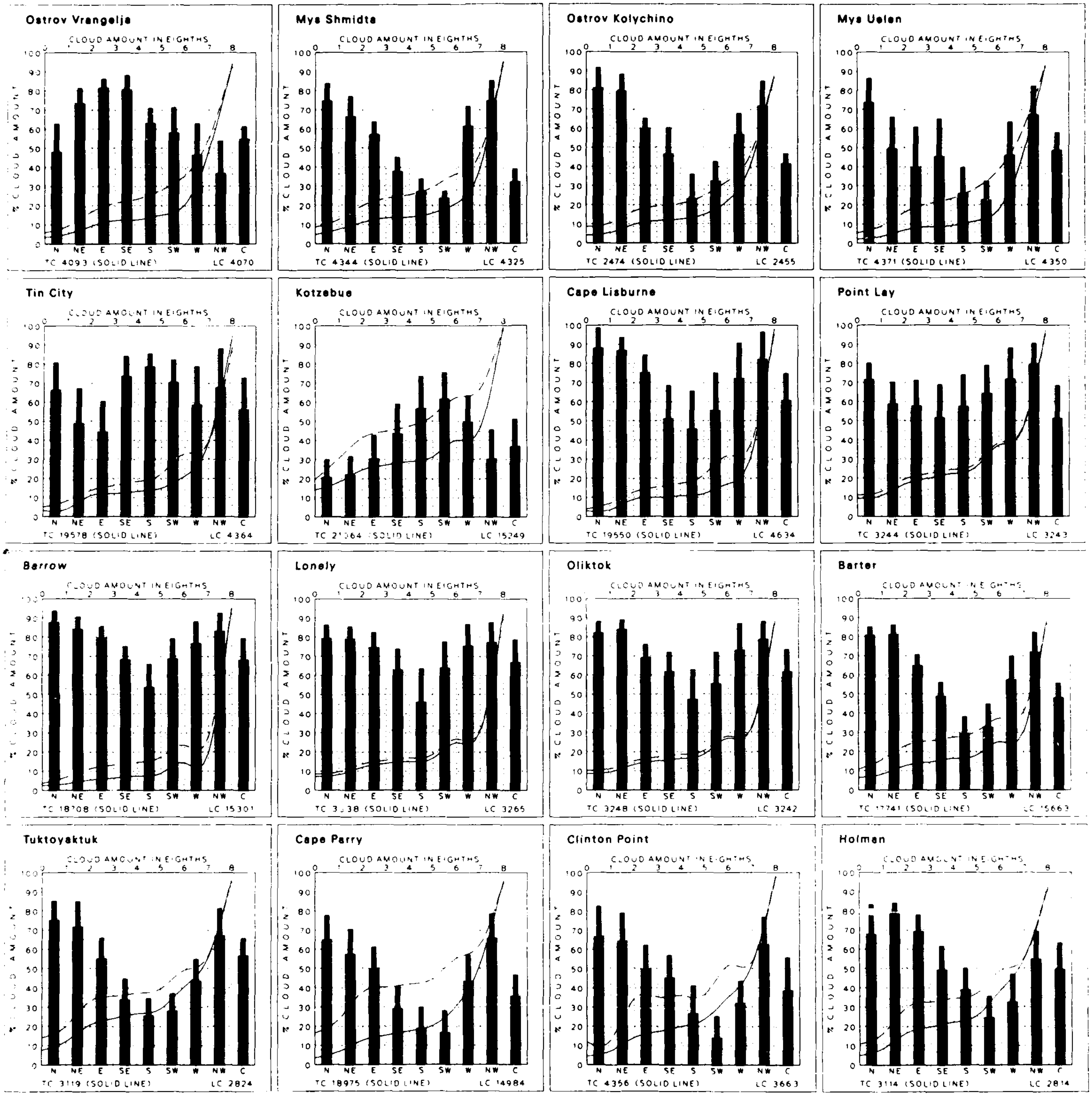
6 Clouds ≦2/8 and ≧5/8 July


Ostrov Vrangelja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4282 (SOLID LINE) LC 4260
Mys Shmidta
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 4579 (SOLID LINE) LC 4558
Ostrov Kolychino
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 2571 (SOLID LINE) LC 2539
Mys Uelen
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
TC 4549 (SOLID LINE) LC 4533
Tin City
TC 20863 (SOLID LINE) LC 4673
Kotzebue
TC 21793 (SOLID LINE)
Cape Lisburne
TC 20289 (SOLID LINE) LC 4651
Point Lay
TC 3302
Barrow
LC 15794
Lonely
TC 3434 (SOLID LINE) LC 3338
Oliktok
TC 3308 (SOLID LINE) LC 3303
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
TC 4483 (SOLID LINE)
Holman
TC 3203 (SOLID LINE) LC 2869



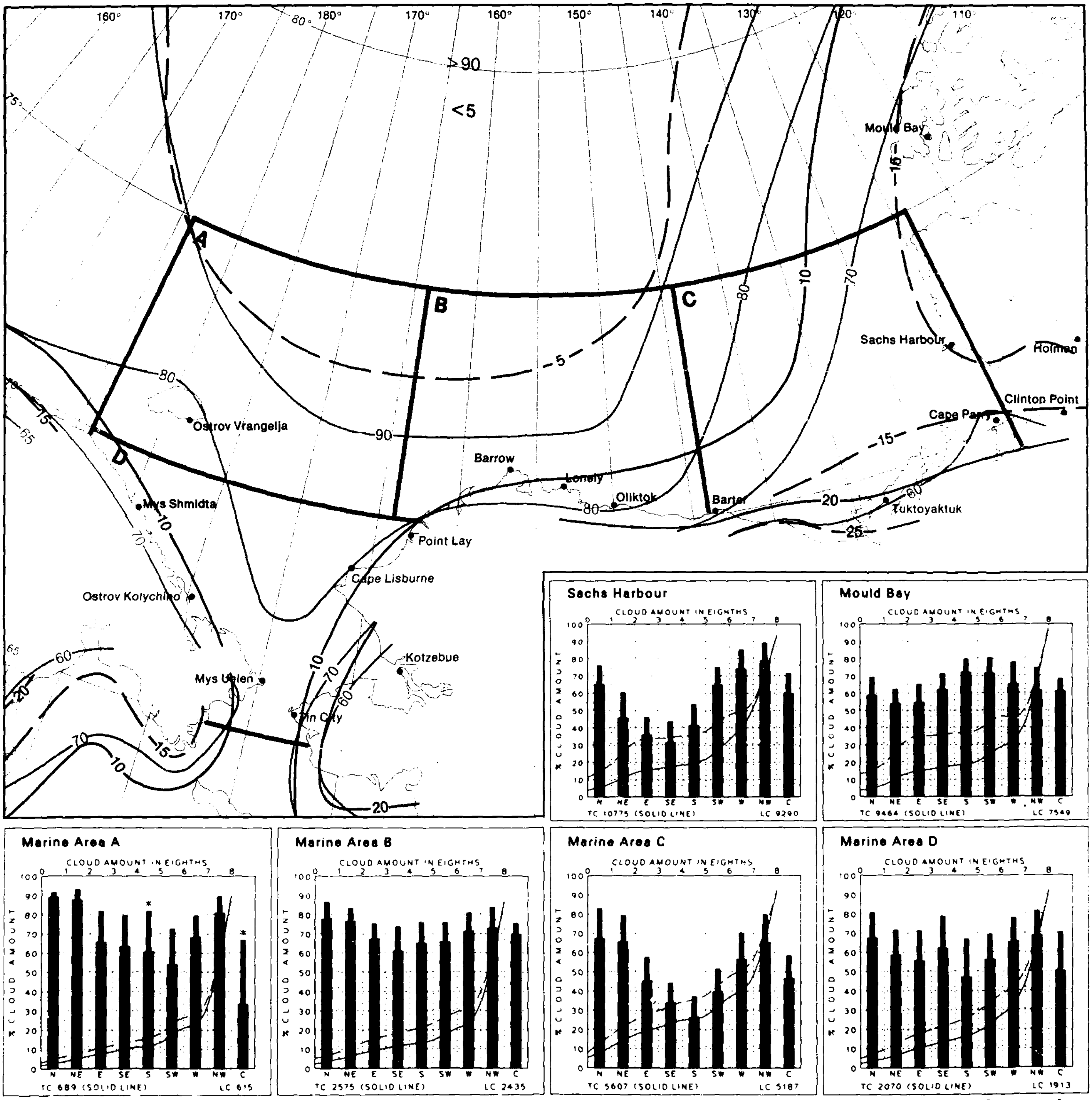
6 Clouds ≦ 2/8 and ≧ 5/8

August



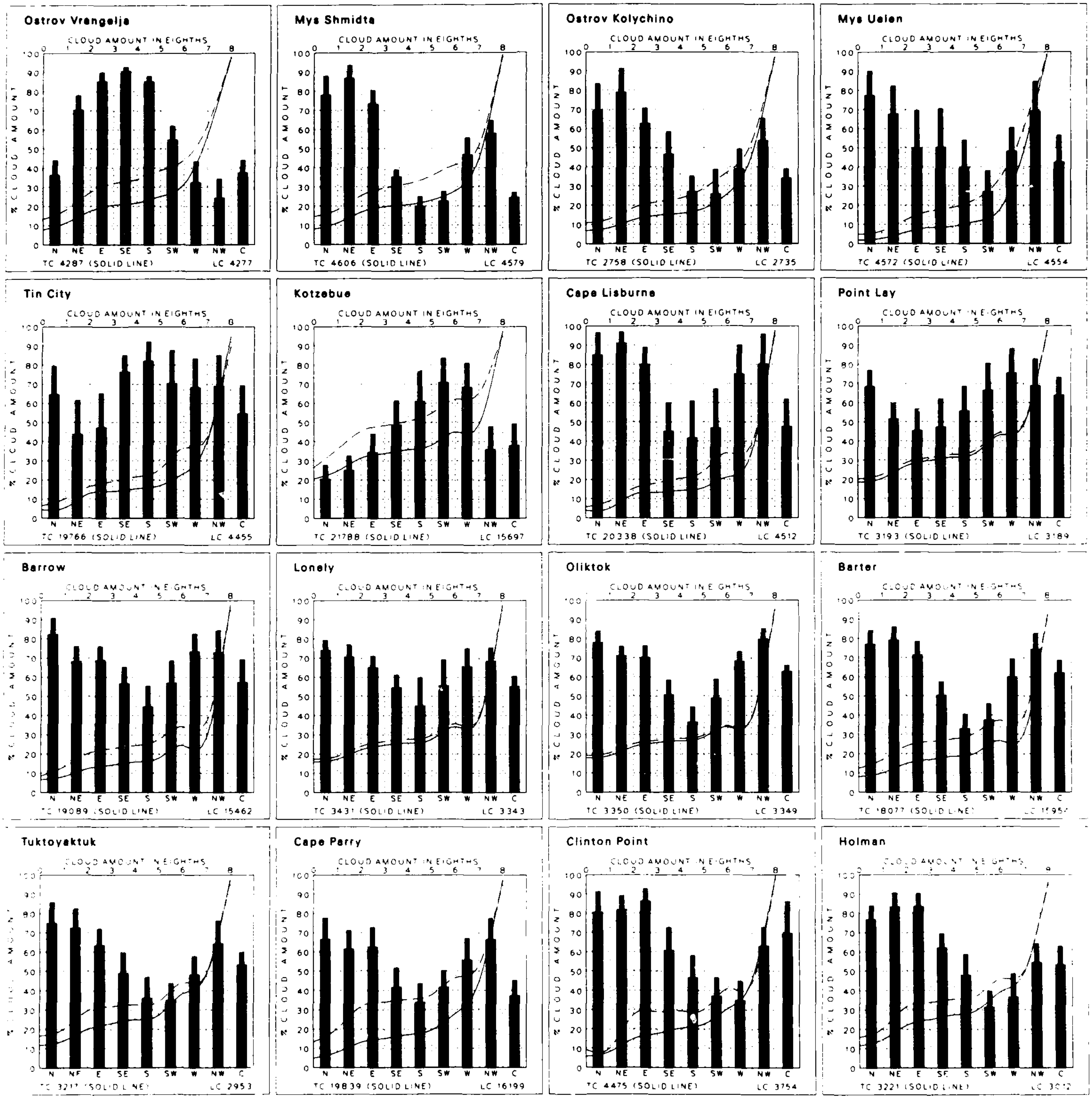
Ostrov Vrangelja
TC 4093 (SOLID LINE) LC 4070
Mys Shmidta
TC 4344 (SOLID LINE) LC 4325
Ostrov Kolychino
TC 2474 (SOLID LINE) LC 2455
Mys Uelen
TC 4371 (SOLID LINE) LC 4350
Tin City
TC 19578 (SOLID LINE) LC 4364
Kotzebue
LC 15249
Cape Lisburne
TC 19550 (SOLID LINE) LC 4634
Point Lay
TC 3244 (SOLID LINE) LC 3243
Barrow
TC 18708 (SOLID LINE) LC 15301
Lonely
LC 3265
Oliktok
TC 3248 (SOLID LINE) LC 3242
Barter
LC 15663
Tuktoyaktuk
TC 3119 (SOLID LINE) LC 2824
Cape Parry
TC 18975 (SOLID LINE) LC 14984
Clinton Point
TC 4356 (SOLID LINE) LC 3663
Holman
TC 3114 (SOLID LINE) LC 2814
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C

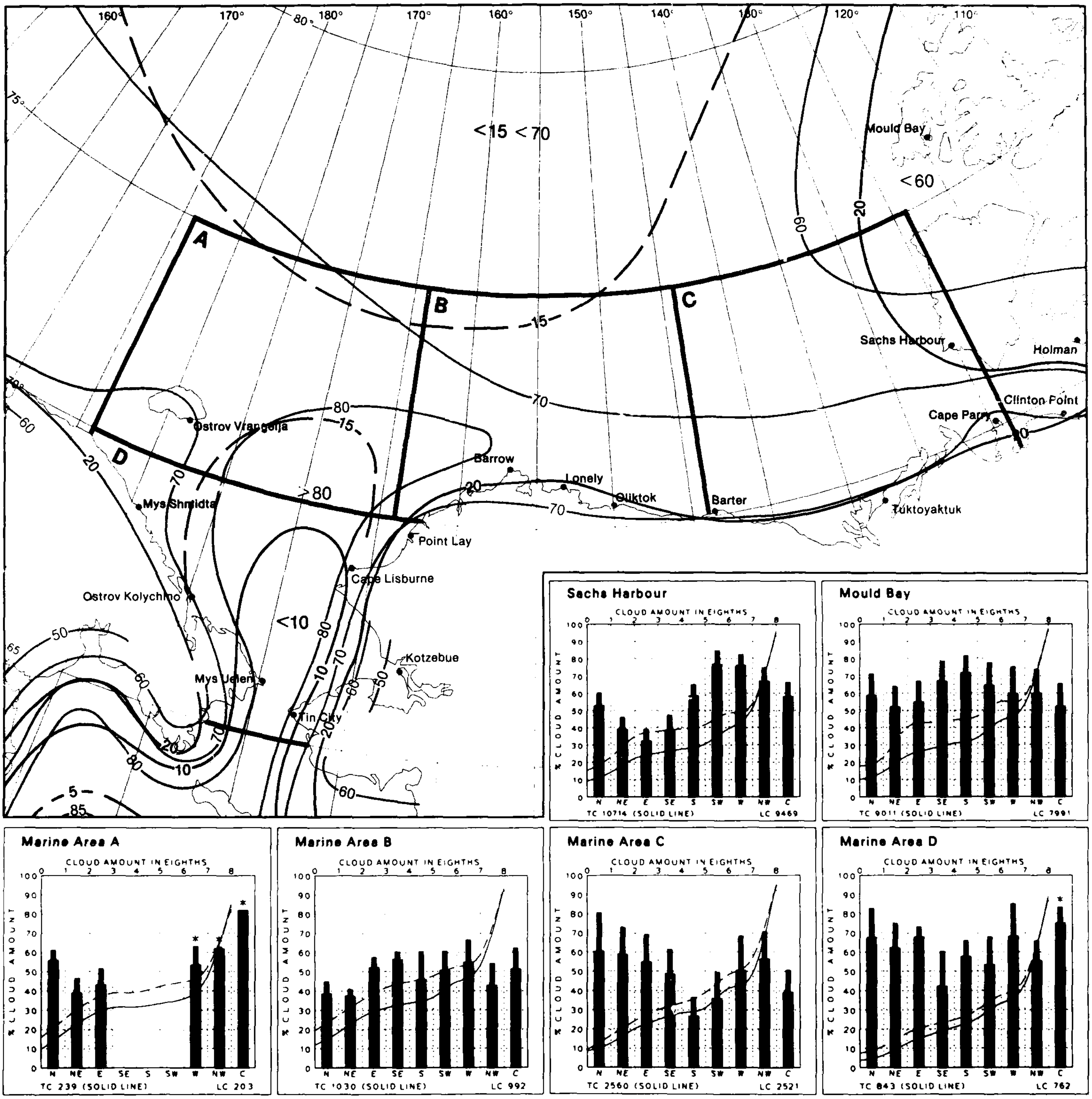
September



6 Clouds ≦2/8 and ≧5/8

September

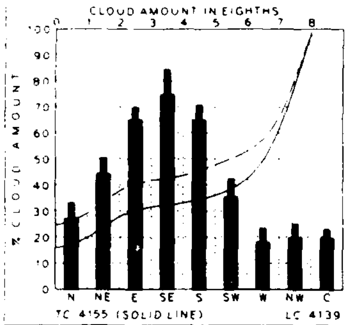

Ostrov Vrangelja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4287 (SOLID LINE) LC 4277
Mys Shmidta
TC 4606 (SOLID LINE) LC 4579
Ostrov Kolychino
TC 2758 (SOLID LINE) LC 2735
Mys Uelen
TC 4572 (SOLID LINE) LC 4554
Tin City
TC 19766 (SOLID LINE) LC 4455
Kotzebue
TC 21788 (SOLID LINE) LC 15697
Cape Lisburne
TC 20338 (SOLID LINE) LC 4512
Point Lay
TC 3193 (SOLID LINE) LC 3189
Barrow
TC 19089 (SOLID LINE) LC 15462
Lonely
TC 3431 (SOLID LINE) LC 3343
Oliktok
TC 3350 (SOLID LINE) LC 3349
Barter
TC 18077 (SOLID LINE)
Tuktoyaktuk
LC 2953
Cape Parry
TC 19839 (SOLID LINE) LC 16199
Clinton Point
TC 4475 (SOLID LINE) LC 3754
Holman
TC 3221 (SOLID LINE)



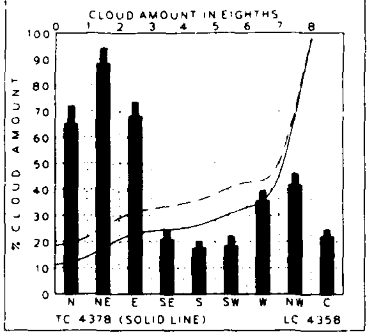
6 Clouds ≦ 2/8 and ≧ 5/8

October

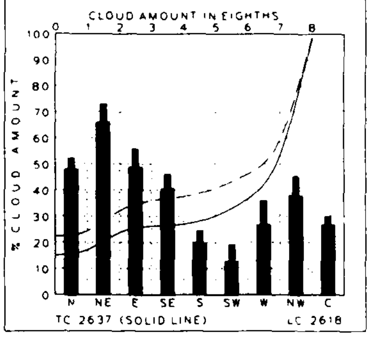
Ostrov Vrangelja



Mys Shmidta



Ostrov Kolychino



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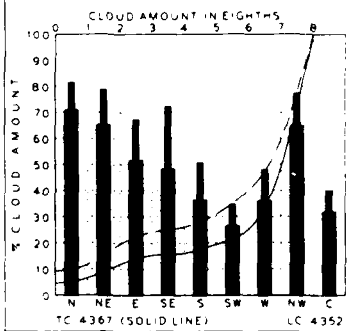

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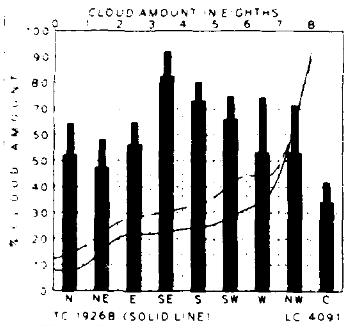
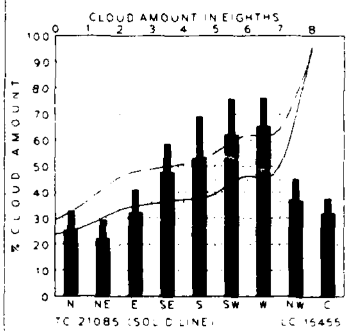


Kotzebue



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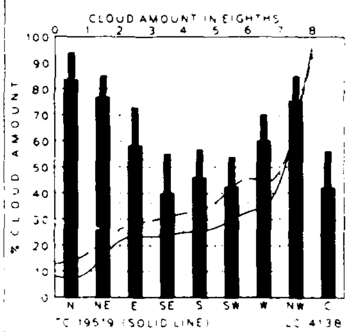

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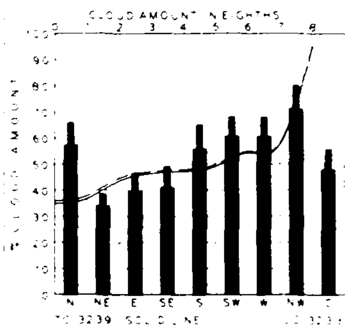
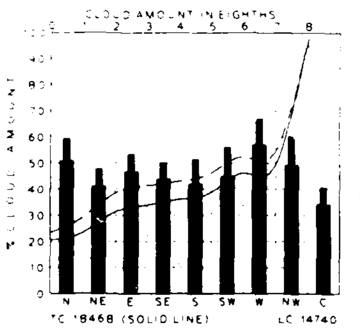
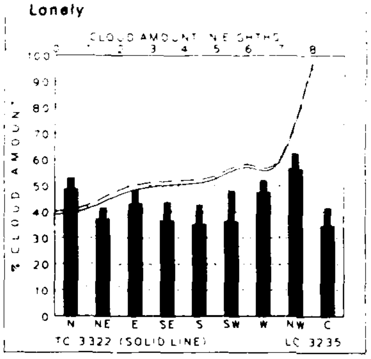


Barrow



Lonely



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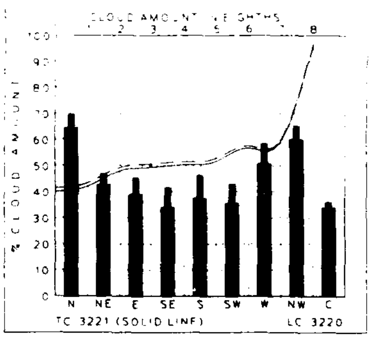

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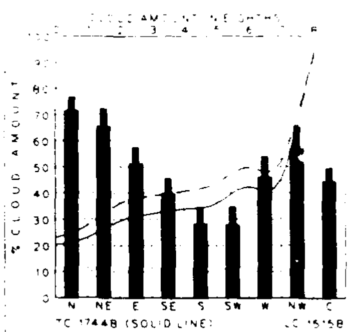
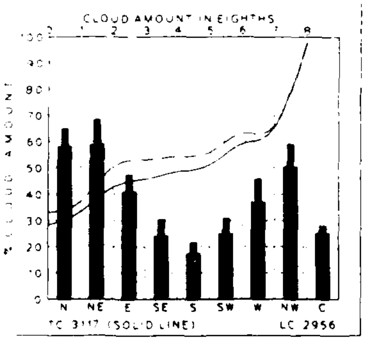


Tuktoyaktuk



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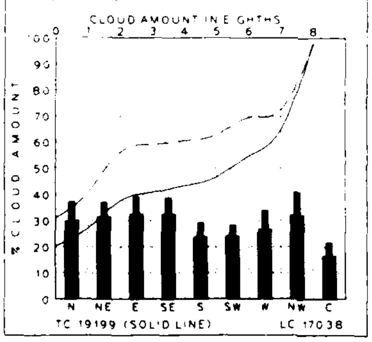
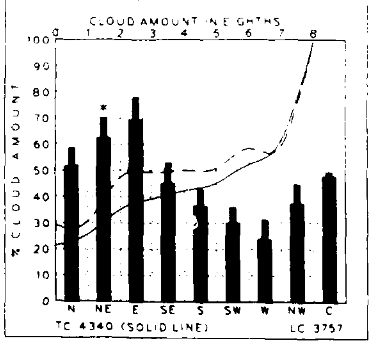
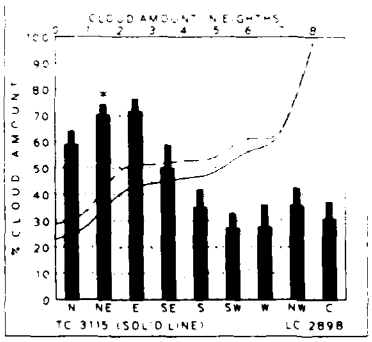
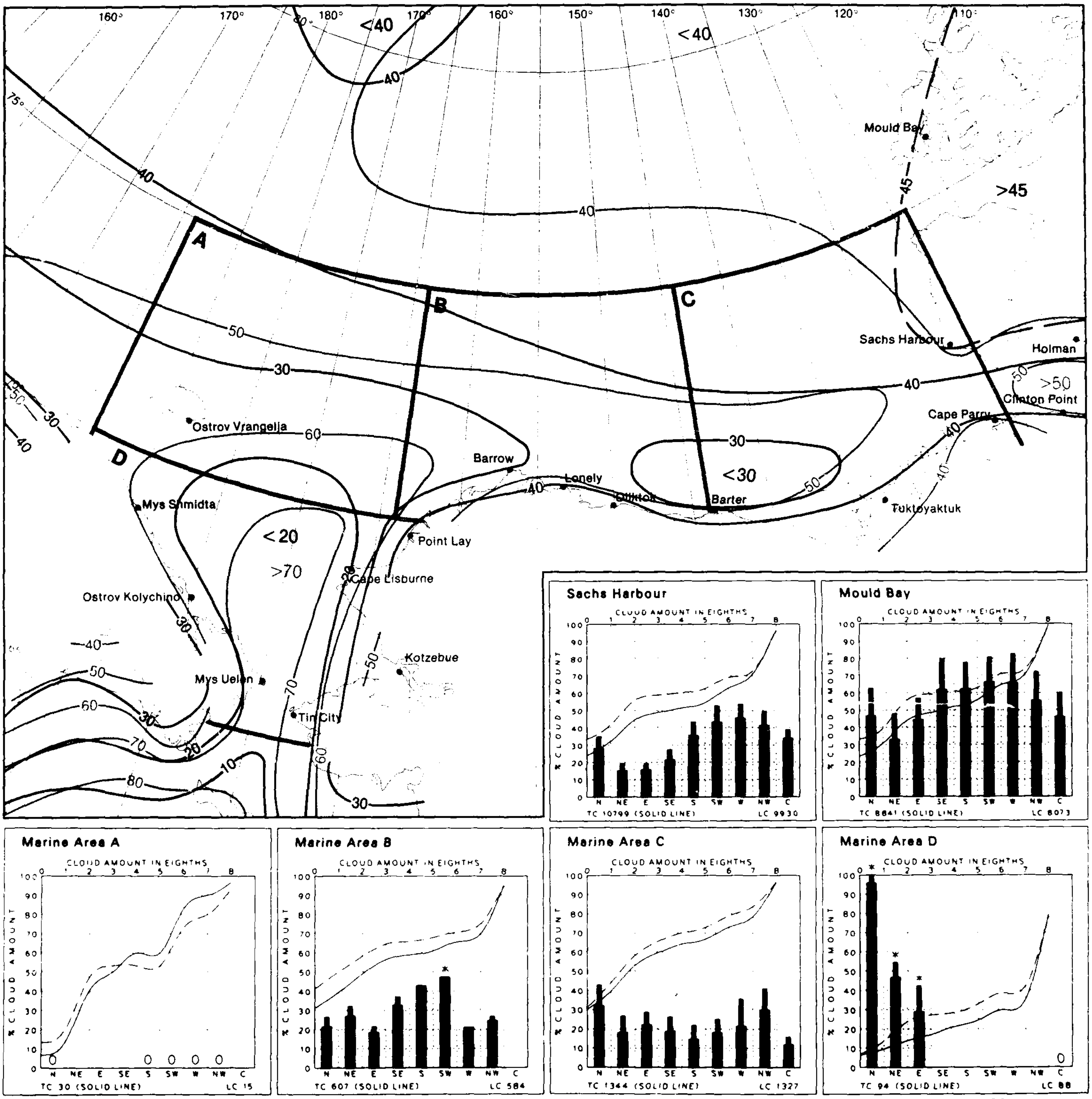


Clinton Point



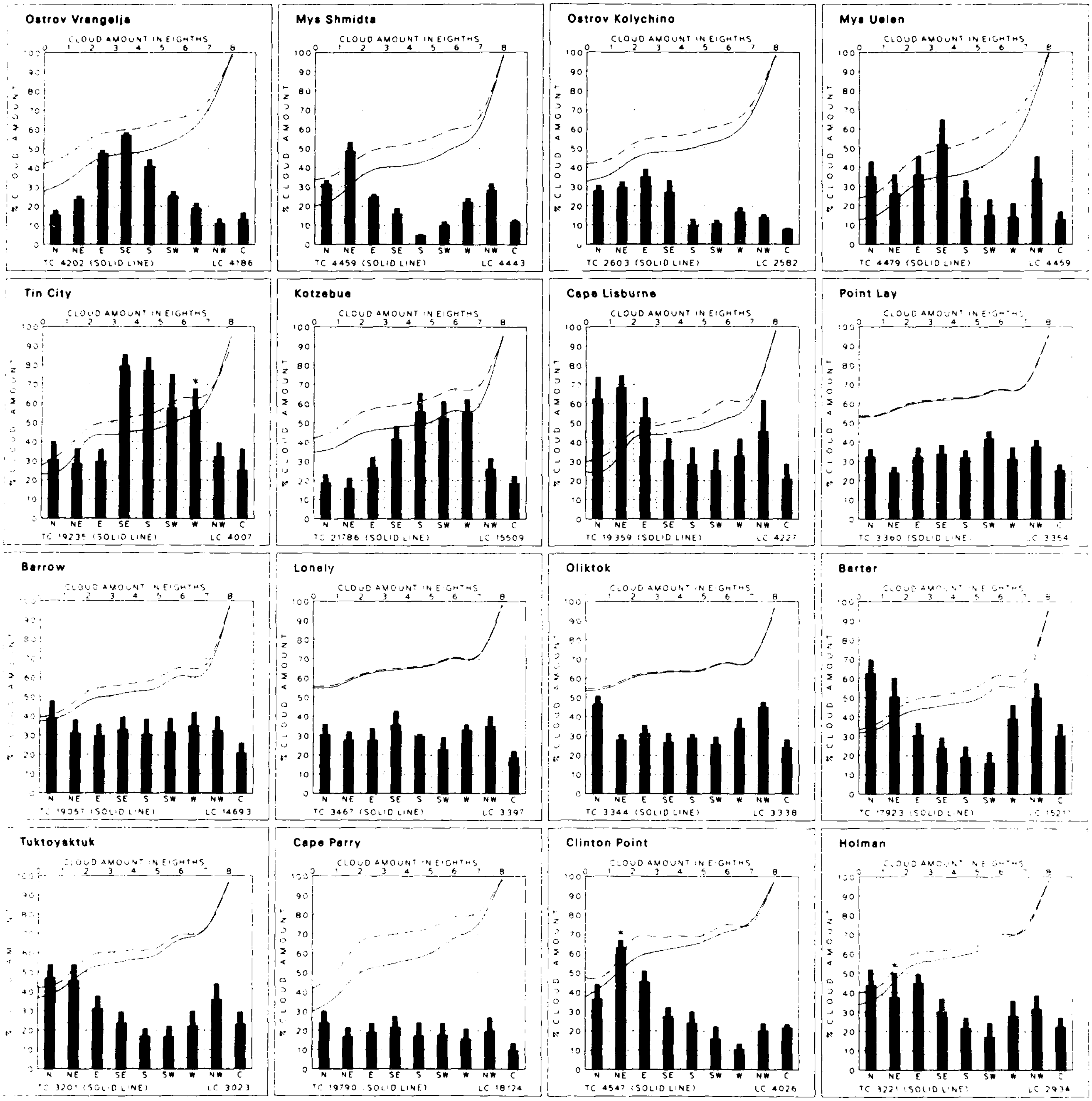
Holman

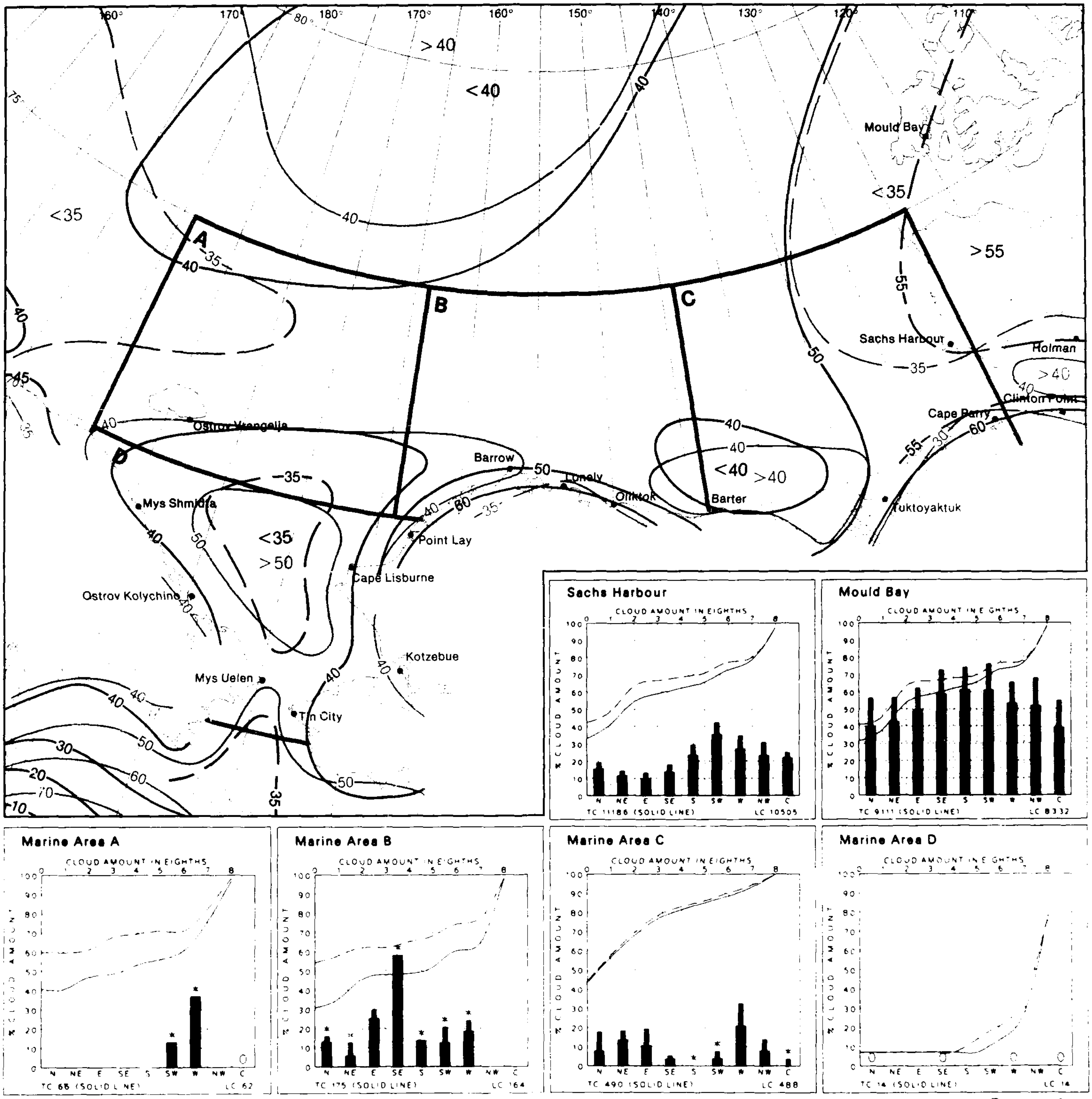




6 Clouds ≦2/8 and ≧5/8

November


Ostrov Vrangelja
TC 4202 (SOLID LINE) LC 4186
Mys Shmidta
TC 4459 (SOLID LINE) LC 4443
Ostrov Kolychino
TC 2603 (SOLID LINE) LC 2582
Mys Uelen
TC 4479 (SOLID LINE) LC 4459
Tin City
Kotzebue
Cape Lisburne
TC 19359 (SOLID LINE)
Point Lay
Barrow
Lonely
Oliktok
TC 3344 (SOLID LINE) LC 3338
Barter
Tuktoyaktuk
Cape Parry
TC 19790 (SOLID LINE) LC 18124
Clinton Point
TC 4547 (SOLID LINE) LC 4026
Holman
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C



6 Clouds ≦ 2/8 and ≧ 5/8

December

Map 7. Air temperature extremes (°C)

BLACK LINE – Maximum (99%) air temperature (1% of temperatures were greater than the given value).

BLUE LINE – Minimum (1%) air temperature (1% of temperatures were equal to or less than the given value).

Albers Equal–Area Conic Projection

Graphs: *Air temperature/wind speed*

1694 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
8,9	+	+	+	+	+
6,7	+	1	2	2	1
4,5	1	7	13	9	1
2,3	2	5	11	6	1
0,1	1	3	5	4	+
−2,−1	1	2	4	3	1
−4,−3	+	1	4	3	+
−6,−5	+	1	1	1	1
−8,−7	0	+	+	+	+
−10,−9	0	+	+	+	+
−12,−11	0	0	0	0	0

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots).

Number of observations.

(2% of all observations reported temperature 6-7°C simultaneously with wind speed of 22-33 knots.)

+ Indicates <.5% but >0.

Air temperature is one of the elements most frequently observed by mariners. On many ships, the heating effect of the ship's structure has a tendency to produce higher than actual ambient air temperature readings because of instrument exposure. This is especially true under calm, sunny conditions. Despite the inaccuracies, the large-scale patterns and mean gradients of the isopleth analyses are relatively accurate.

The temperature scale of the graphs varies in both range and class interval. The graph can be used to determine the extent of human discomfort from the combined effects of extreme heat or cold and winds, or to estimate the likelihood of superstructure icing. Refer to Section I of this atlas for detailed information on superstructure icing and wind chill.

Ostrov Vrangelja

4164 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	2	5	5	1	+
-16,-15	1	1	2	1	+
-18,-17	1	2	2	2	1
-20,-19	1	2	2	1	1
-22,-21	2	3	4	2	1
-24,-23	2	3	3	2	1
-26,-25	3	3	3	2	+
-28,-27	5	3	3	1	+
-30,-29	4	2	1	+	+
-32,-31	3	2	1	+	+
≤-33	7	2	+	+	0

Mys Shmidta

4703 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	3	6	5	2	+
-18,-17	2	2	2	1	+
-20,-19	1	2	2	+	+
-22,-21	1	2	4	1	+
-24,-23	1	3	4	1	+
-26,-25	2	3	4	1	+
-28,-27	3	4	5	2	1
-30,-29	1	2	2	1	+
-32,-31	2	2	3	1	+
-34,-33	2	2	2	+	+
≤-35	6	3	1	+	0

Ostrov Kolychino

2885 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	1	5	7	4	+
-14,-13	+	1	2	+	0
-16,-15	+	2	2	+	0
-18,-17	1	3	2	1	+
-20,-19	+	3	3	1	0
-22,-21	+	4	4	+	+
-24,-23	1	3	3	1	+
-26,-25	1	4	4	1	+
-28,-27	1	4	4	1	+
-30,-29	1	3	3	1	+
≤-31	5	9	4	+	+

Mys Uelen

4675 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	5	6	5	4
-10,-9	+	1	1	+	+
-12,-11	1	2	2	[illegible]	+
-14,-13	1	2	2	1	+
-16,-15	1	3	2	+	+
-18,-17	1	3	3	1	+
-20,-19	1	3	2	+	+
-22,-21	1	3	3	+	+
-24,-23	1	3	3	[illegible]	+
-26,-25	2	2	2	1	+
≤-27	6	7	8	2	+

Tin City

19113 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	3	6	10	4	+
-10,-9	1	2	3	1	+
-12,-11	1	1	2	1	+
-14,-13	1	1	3	2	+
-16,-15	+	1	2	2	+
-18,-17	+	1	2	2	+
-20,-19	+	1	3	3	+
-22,-21	1	1	3	3	+
-24,-23	1	1	4	4	+
-26,-25	+	1	3	2	1
≤-27	+	1	7	6	1

Kotzebue

22043 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	+	4	10	[illegible]	1
-12,-11	+	2	2	1	+
-14,-13	+	2	3	2	+
-16,-15	+	2	2	1	+
-18,-17	1	3	2	1	+
-20,-19	1	3	2	1	+
-22,-21	1	3	2	1	+
-24,-23	1	3	2	1	+
-26,-25	1	2	1	+	+
-28,-27	1	3	2	+	+
≤-29	6	11	4	1	+

Cape Lisburne

18369 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	2	4	6	6	1
-10,-9	1	2	1	1	+
-12,-11	1	2	1	+	+
-14,-13	1	2	1	+	+
-16,-15	1	2	1	+	+
-18,-17	1	3	2	+	+
-20,-19	1	4	3	1	+
-22,-21	1	4	2	+	+
-24,-23	1	4	3	1	+
-26,-25	1	3	2	+	+
≤-27	5	11	7	1	+

Point Lay

3299 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	3	10	[illegible]	2	+
-18,-17	1	2	[illegible]	[illegible]	+
-20,-19	1	2	2	[illegible]	+
-22,-21	1	2	2	[illegible]	+
-24,-23	1	2	2	[illegible]	+
-26,-25	1	2	2	[illegible]	+
-28,-27	1	3	3	[illegible]	+
-30,-29	2	3	3	[illegible]	+
-32,-31	[illegible]	2	2	[illegible]	+
-34,-33	[illegible]	3	2	[illegible]	+
≤-35	4	8	5	2	+

Barrow

18798 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	+	5	6	2	+
-18,-17	+	2	2	1	+
-20,-19	+	2	3	1	0
-22,-21	+	3	3	1	+
-24,-23	+	4	5	+	0
-26,-25	+	4	3	+	0
-28,-27	1	5	4	+	+
-30,-29	1	6	3	+	0
-32,-31	1	5	2	+	0
-34,-33	1	6	1	+	0
≤-35	3	12	1	+	0

Lonely

3404 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	2	7	6	2	+
-20,-19	1	2	2	1	+
-22,-21	1	2	2	1	+
-24,-23	1	4	4	1	+
-26,-25	1	3	3	1	0
-28,-27	1	4	4	1	+
-30,-29	1	5	3	+	0
-32,-31	1	4	1	+	0
-34,-33	2	5	2	+	0
-36,-35	2	4	1	0	0
≤-37	4	8	1	+	0

Oliktok

3239 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	2	7	7	2	+
-20,-19	+	2	2	1	+
-22,-21	+	2	2	1	0
-24,-23	1	3	4	1	+
-26,-25	1	2	3	1	+
-28,-27	1	3	4	1	+
-30,-29	1	3	4	1	+
-32,-31	1	3	2	+	0
-34,-33	1	3	3	+	0
-36,-35	1	2	2	+	0
≤-37	4	10	3	+	0

Barter

18317 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	5	4	2	[illegible]
-18,-17	+	2	2	[illegible]	+
-20,-19	+	2	3	[illegible]	[illegible]
-22,-21	+	2	2	[illegible]	+
-24,-23	[illegible]	3	3	1	+
-26,-25	1	2	3	1	+
-28,-27	1	4	4	2	+
-30,-29	1	4	4	[illegible]	+
-32,-31	[illegible]	3	2	[illegible]	+
-34,-33	[illegible]	4	2	[illegible]	+
≤-35	3	10	4	1	+

Tuktoyaktuk

3223 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	1	6	6	1	+
-20,-19	+	2	2	+	+
-22,-21	+	1	2	+	0
-24,-23	1	3	3	+	0
-26,-25	+	3	3	+	0
-28,-27	1	4	4	1	+
-30,-29	1	5	4	1	0
-32,-31	1	4	3	+	+
-34,-33	2	6	2	+	0
-36,-35	2	4	2	+	0
≤-37	4	11	2	+	0

Cape Parry

19835 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	2	5	6	1	+
-22,-21	1	2	2	+	+
-24,-23	1	2	3	1	+
-26,-25	1	3	3	1	+
-28,-27	2	3	4	1	+
-30,-29	2	3	5	1	+
-32,-31	2	3	5	1	+
-34,-33	3	5	5	1	+
-36,-35	2	4	3	+	+
-38,-37	2	3	2	+	0
≤-39	2	2	1	+	0

Clinton Point

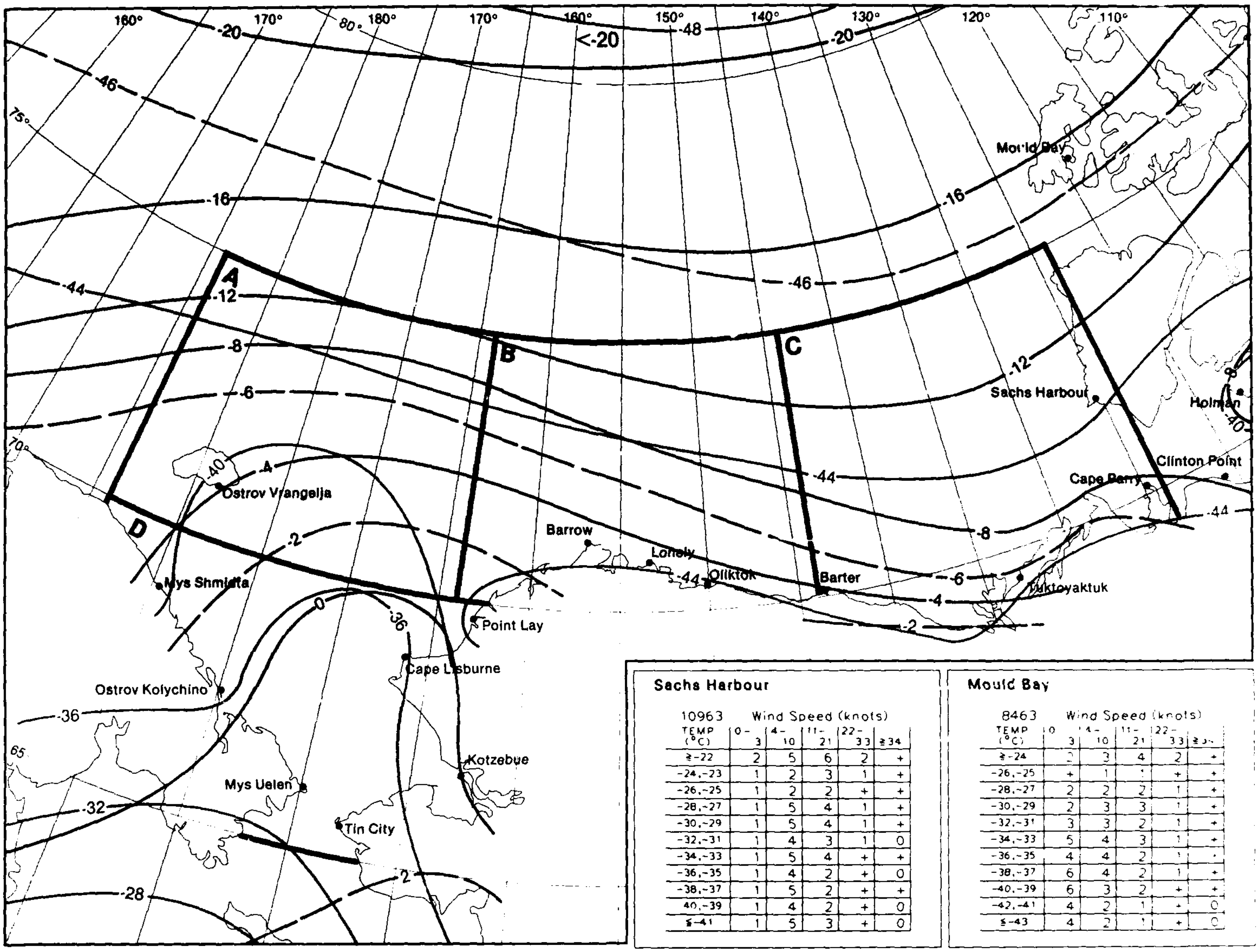
4620 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	1	6	6	2	+
-22,-21	+	1	1	+	+
-24,-23	1	3	3	+	+
-26,-25	1	3	3	+	+
-28,-27	1	5	5	1	+
-30,-29	2	5	4	1	+
-32,-31	2	4	3	1	+
-34,-33	2	6	2	+	0
-36,-35	1	5	2	+	0
-38,-37	1	6	1	+	0
≤-39	2	5	+	+	0

Holman

32[illegible]2 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	3	4	3	2	[illegible]
-20,-19	1	1	1	1	+
-22,-21	1	2	1	1	+
-24,-23	2	2	2	[illegible]	+
-26,-25	2	2	2	[illegible]	+
-28,-27	3	3	4	3	[illegible]
-30,-29	3	5	4	3	[illegible]
-32,-31	3	4	[illegible]	1	[illegible]
-34,-33	3	3	2	1	+
-36,-35	2	3	1	+	+
≤-37	2	4	2	+	+



Sachs Harbour

10963 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-22	2	5	6	2	+
-24,-23	1	2	3	1	+
-26,-25	1	2	2	+	+
-28,-27	1	5	4	1	+
-30,-29	1	5	4	1	+
-32,-31	1	4	3	1	0
-34,-33	1	5	4	+	+
-36,-35	1	4	2	+	0
-38,-37	1	5	2	+	+
40,-39	1	4	2	+	0
≤-41	1	5	3	+	0

Mould Bay

8463 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-24	2	3	4	2	+
-26,-25	+	1	1	+	+
-28,-27	2	2	2	1	+
-30,-29	2	3	3	1	+
-32,-31	3	3	2	1	+
-34,-33	5	4	3	1	+
-36,-35	4	4	2	1	+
-38,-37	6	4	2	1	+
-40,-39	6	3	2	+	+
-42,-41	4	2	1	+	0
≤-43	4	2	1	+	0

Marine Area A

339 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	+	4	11	2	0
-22,-21	0	2	3	1	0
-24,-23	0	1	2	+	0
-26,-25	0	1	2	+	0
-28,-27	1	2	1	+	0
-30,-29	2	6	2	+	0
-32,-31	3	4	2	0	0
-34,-33	3	5	3	0	0
-36,-35	1	4	2	0	0
-38,-37	2	4	2	1	0
≤-39	10	7	3	+	0

Marine Area B

456 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	8	6	1	1	0
-22,-21	2	8	+	0	0
-24,-23	2	8	0	0	0
-26,-25	2	3	0	0	0
-28,-27	3	3	0	0	0
-30,-29	6	2	0	0	0
-32,-31	6	3	0	0	0
-34,-33	6	0	0	0	0
-36,-35	10	2	+	0	0
-38,-37	6	0	0	0	0
≤-39	13	+	0	+	0

Marine Area C

400 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	+	2	2	2	+
-18,-17	0	+	3	2	+
-20,-19	0	1	4	1	+
-22,-21	+	1	4	3	1
-24,-23	+	3	3	4	+
-26,-25	+	2	3	2	+
-28,-27	+	4	3	1	+
-30,-29	3	3	2	+	1
-32,-31	1	4	4	+	+
-34,-33	1	5	3	+	+
≤-35	1	7	2	0	0

Marine Area D

10 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	0	0	0	0
6,7	0	0	0	0	0
4,5	0	0	10	0	0
2,3	0	0	0	0	0
0,1	0	10	20	0	0
-2,-1	20	10	30	0	0
-4,-3	0	0	0	0	0
-6,-5	0	0	0	0	0
-8,-7	0	0	0	0	0
≤-9	0	0	0	0	0

Ostrov Vrangelja

3890 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	3	2	+	+
-18,-17	1	1	1	1	+
-20,-19	1	1	2	1	+
-22,-21	2	3	3	2	+
-24,-23	3	3	3	2	+
-26,-25	3	4	3	2	+
-28,-27	6	3	2	1	1
-30,-29	4	2	1	1	+
-32,-31	7	2	1	+	+
-34,-33	6	1	+	+	+
≤-35	9	1	+	+	+

Mys Shmidta

4371 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	1	4	3	1	+
-20,-19	+	1	1	+	+
-22,-21	1	2	2	1	+
-24,-23	1	3	2	1	+
-26,-25	2	3	4	2	+
-28,-27	2	5	6	3	+
-30,-29	1	2	3	1	+
-32,-31	3	3	4	2	+
-34,-33	2	3	3	1	+
-36,-35	4	3	2	1	+
≤-37	5	3	1	+	0

Ostrov Kolychino

2768 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	4	5	2	+
-18,-17	1	2	2	1	+
-20,-19	1	1	2	+	+
-22,-21	1	2	3	+	0
-24,-23	1	2	4	1	0
-26,-25	1	2	5	1	+
-28,-27	1	5	5	2	+
-30,-29	1	3	3	1	+
-32,-31	2	6	4	+	0
-34,-33	2	6	2	+	0
≤-35	2	7	2	+	0

Mys Uelen

4357 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	2	4	5	3	2
-16,-15	1	2	1	+	+
-18,-17	1	3	2	+	+
-20,-19	1	2	1	+	0
-22,-21	1	3	3	+	0
-24,-23	1	3	3	1	0
-26,-25	1	2	4	+	+
-28,-27	3	4	6	1	+
-30,-29	2	3	3	+	+
-32,-31	3	4	3	+	+
≤-33	5	5	3	1	0

Tin City

17416 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	3	5	8	3	+
-14,-13	1	1	2	1	+
-16,-15	1	1	2	2	+
-18,-17	1	1	3	3	+
-20,-19	+	1	3	3	+
-22,-21	+	+	2	3	+
-24,-23	+	1	4	5	1
-26,-25	+	1	3	5	1
-28,-27	+	+	3	4	1
-30,-29	+	1	4	4	1
≤-31	+	1	6	6	1

Kotzebue

19709 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	1	5	10	5	1
-14,-13	+	2	2	1	+
-16,-15	+	2	2	1	+
-18,-17	+	2	2	1	+
-20,-19	1	3	2	1	+
-22,-21	1	3	2	+	+
-24,-23	1	4	3	+	+
-26,-25	1	3	2	+	+
-28,-27	2	4	2	+	+
-30,-29	2	4	1	+	+
≤-31	6	9	2	+	+

Cape Lisburne

16993 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	3	5	5	4	1
-16,-15	1	2	1	+	+
-18,-17	1	2	1	+	+
-20,-19	1	3	2	+	0
-22,-21	1	4	2	+	+
-24,-23	2	5	4	+	+
-26,-25	2	4	3	+	+
-28,-27	2	5	3	+	+
-30,-29	2	5	3	+	+
-32,-31	2	3	2	+	+
≤-33	4	6	3	+	+

Point Lay

2997 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	3	8	[illegible]	2	+
-22,-21	1	2	1	+	+
-24,-23	1	2	1	+	+
-26,-25	1	2	2	+	0
-28,-27	1	3	2	+	+
-30,-29	1	4	4	+	+
-32,-31	1	3	3	+	+
-34,-33	1	3	3	+	+
-36,-35	1	3	3	+	+
-38,-37	1	4	2	+	0
≤-39	3	8	4	+	0

Barrow

17135 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	+	6	6	1	+
-22,-21	+	2	3	+	+
-24,-23	+	2	4	+	+
-26,-25	+	2	3	+	0
-28,-27	+	5	4	+	0
-30,-29	1	8	4	+	0
-32,-31	1	6	2	+	0
-34,-33	1	8	2	+	0
-36,-35	1	6	1	+	0
-38,-37	1	6	1	0	0
≤-39	1	7	1	0	0

Lonely

3126 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	2	7	5	1	+
-22,-21	+	2	2	+	+
-24,-23	+	2	2	1	0
-26,-25	1	2	2	+	0
-28,-27	1	3	2	+	+
-30,-29	2	5	3	+	0
-32,-31	2	5	3	+	0
-34,-33	2	6	2	+	0
-36,-35	2	5	1	+	0
-38,-37	3	6	1	0	0
≤-39	5	9	+	0	0

Oliktok

2969 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	2	7	6	2	+
-22,-21	1	2	2	1	+
-24,-23	1	3	2	1	+
-26,-25	1	2	2	+	+
-28,-27	1	2	2	1	+
-30,-29	1	4	3	+	0
-32,-31	1	3	2	+	0
-34,-33	2	5	2	+	0
-36,-35	1	4	3	+	0
-38,-37	2	5	2	+	0
≤-39	5	11	3	+	0

Barter

16692 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	1	6	6	3	+
-22,-21	+	1	2	+	+
-24,-23	+	2	3	+	+
-26,-25	+	2	2	1	+
-28,-27	1	3	4	+	+
-30,-29	+	4	3	+	+
-32,-31	+	3	3	+	+
-34,-33	1	4	4	+	+
-36,-35	1	4	3	+	+
-38,-37	1	5	3	+	+
≤-39	3	9	3	+	0

Tuktoyaktuk

2919 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	2	7	7	1	+
-22,-21	1	3	2	+	0
-24,-23	+	3	3	+	0
-26,-25	1	3	2	+	0
-28,-27	1	5	3	+	0
-30,-29	1	6	3	+	0
-32,-31	1	4	2	+	0
-34,-33	2	6	2	+	0
-36,-35	2	5	2	+	0
-38,-37	2	6	1	0	0
≤-39	4	7	1	0	0

Cape Parry

18086 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	2	4	5	1	+
-22,-21	+	1	2	1	+
-24,-23	1	1	3	1	+
-26,-25	1	1	3	1	+
-28,-27	1	3	4	1	+
-30,-29	2	3	5	1	+
-32,-31	2	4	4	1	0
-34,-33	4	6	5	+	0
-36,-35	3	4	3	+	+
-38,-37	3	4	2	+	+
≤-39	3	4	2	+	0

Clinton Point

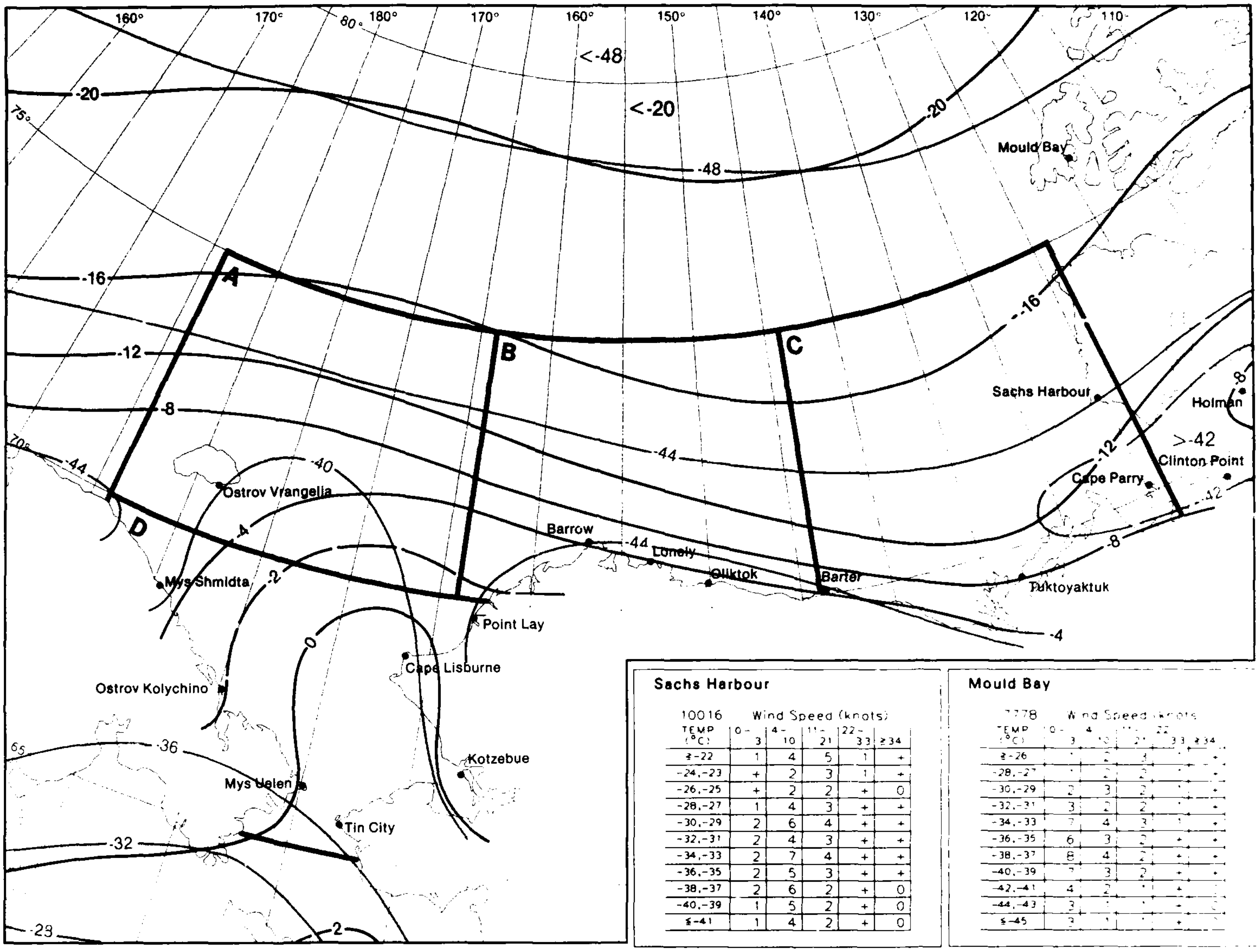
4240 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	2	7	5	1	+
-22,-21	1	3	2	1	+
-24,-23	1	2	2	+	+
-26,-25	+	2	2	+	+
-28,-27	1	3	3	1	+
-30,-29	+	4	4	+	+
-32,-31	1	5	4	+	+
-34,-33	2	8	3	+	0
-36,-35	1	6	2	+	0
-38,-37	2	8	1	+	0
≤-39	2	5	+	+	0

Holman

2925 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	3	2	2	+	+
-20,-19	1	2	1	+	+
-22,-21	1	2	1	+	+
-24,-23	2	3	2	1	1
-26,-25	2	2	2	1	+
-28,-27	2	4	3	2	1
-30,-29	5	5	3	2	+
-32,-31	3	3	2	1	+
-34,-33	3	5	2	1	1
-36,-35	2	3	1	+	+
≤-37	3	4	1	+	+



Sachs Harbour

TEMP (°C)	10016 Wind Speed (knots) 0-3	4-10	11-21	22-33	≥34
≥-22	1	4	5	1	+
-24,-23	+	2	3	1	+
-26,-25	+	2	2	+	0
-28,-27	1	4	3	+	+
-30,-29	2	6	4	+	+
-32,-31	2	4	3	+	+
-34,-33	2	7	4	+	+
-36,-35	2	5	3	+	+
-38,-37	2	6	2	+	0
-40,-39	1	5	2	+	0
≤-41	1	4	2	+	0

Mould Bay

TEMP (°C)	[illegible]78 Wind Speed (knots) 0-3	4-10	11-21	22-33	≥34
≥-26	[illegible]	2	3	[illegible]	+
-28,-27	[illegible]	2	2	[illegible]	+
-30,-29	2	3	2	[illegible]	+
-32,-31	3	2	2	[illegible]	+
-34,-33	7	4	3	1	+
-36,-35	6	3	2	+	+
-38,-37	8	4	2	+	+
-40,-39	7	3	2	+	+
-42,-41	4	2	[illegible]	+	[illegible]
-44,-43	3	[illegible]	[illegible]	+	0
≤-45	3	1	[illegible]	+	[illegible]

Marine Area A

TEMP (°C)	275 Wind Speed (knots) 0-3	4-10	11-21	22-33	≥34
≥-20	4	6	2	2	0
-22,-21	+	2	+	+	0
-24,-23	1	1	2	1	0
-26,-25	0	2	3	+	0
-28,-27	2	3	3	0	0
-30,-29	1	3	1	0	0
-32,-31	1	3	4	0	0
-34,-33	+	8	5	0	0
-36,-35	3	8	5	0	0
-38,-37	3	11	1	0	0
≤-39	1	7	+	0	0

Marine Area B

TEMP (°C)	259 Wind Speed (knots) 0-3	4-10	11-21	22-33	≥34
≥-24	3	5	7	3	0
-26,-25	2	2	+	0	0
-28,-27	2	1	+	0	0
-30,-29	2	4	1	0	0
-32,-31	5	2	+	0	0
-34,-33	8	+	0	0	0
-36,-35	8	0	0	0	0
-38,-37	10	0	0	0	0
-40,-39	19	0	0	0	0
-42,-41	9	0	0	0	0
≤-43	5	0	0	0	0

Marine Area C

TEMP (°C)	333 Wind Speed (knots) 0-3	4-10	11-21	22-33	≥34
≥-20	+	+	4	2	0
-22,-21	+	1	5	1	0
-24,-23	+	1	8	1	0
-26,-25	1	5	5	2	0
-28,-27	1	5	4	0	0
-30,-29	1	6	3	0	0
-32,-31	1	5	3	1	0
-34,-33	2	4	2	1	0
-36,-35	2	5	2	1	0
-38,-37	1	7	2	0	0
≤-39	+	4	1	0	0

Marine Area D

TEMP (°C)	40 Wind Speed (knots) 0-3	4-10	11-21	22-33	≥34
≥-6	0	0	5	0	0
-8,-7	0	2	3	0	0
-10,-9	0	5	0	2	0
-12,-11	0	2	5	5	0
-14,-13	0	[illegible]	2	2	0
-16,-15	0	2	2	0	0
-18,-17	2	0	[illegible]	0	0
-20,-19	0	5	10	5	0
-22,-21	0	0	5	0	0
-24,-23	0	0	2	0	0
≤-25	0	0	5	0	0

Ostrov Vrangelja

4389 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	1	3	3	1	+
-16,-15	1	2	2	1	+
-18,-17	1	2	3	1	+
-20,-19	1	1	3	2	+
-22,-21	3	3	4	2	1
-24,-23	4	3	3	2	1
-26,-25	4	3	2	1	+
-28,-27	6	3	2	1	+
-30,-29	4	2	1	+	+
-32,-31	5	2	1	+	0
≤-33	7	2	+	+	+

Mys Shmidta

4882 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	2	3	3	1	+
-18,-17	1	2	1	+	+
-20,-19	1	1	1	+	+
-22,-21	2	3	3	1	+
-24,-23	1	4	4	2	+
-26,-25	2	4	6	2	+
-28,-27	3	4	6	2	1
-30,-29	1	3	3	2	+
-32,-31	2	3	3	1	+
-34,-33	3	2	2	+	+
≤-35	5	2	1	+	0

Ostrov Kolychino

2992 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	1	3	5	2	+
-16,-15	1	1	1	+	0
-18,-17	1	3	2	+	0
-20,-19	+	2	2	+	0
-22,-21	1	3	3	1	0
-24,-23	1	4	4	1	0
-26,-25	1	4	5	1	0
-28,-27	1	7	6	1	+
-30,-29	1	5	3	+	+
-32,-31	2	6	2	+	0
≤-33	2	7	2	+	0

Mys Uelen

4845 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	2	5	5	3	[illegible]
-14,-13	+	[illegible]	1	+	+
-16,-15	1	2	2	+	0
-18,-17	2	4	2	+	+
-20,-19	1	3	3	+	0
-22,-21	2	4	4	+	0
-24,-23	2	5	4	+	+
-26,-25	2	4	4	+	+
-28,-27	3	3	4	1	+
-30,-29	1	2	2	+	0
≤-31	5	4	2	+	0

Tin City

19490 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	3	6	7	3	+
-12,-11	+	1	2	1	+
-14,-13	1	1	3	2	+
-16,-15	+	1	2	3	+
-18,-17	1	1	3	3	+
-20,-19	+	1	4	5	+
-22,-21	+	1	3	4	+
-24,-23	+	1	4	6	1
-26,-25	+	1	3	3	1
-28,-27	+	1	3	3	1
≤-29	+	1	4	4	1

Kotzebue

21958 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	+	4	7	3	+
-10,-9	+	3	3	1	+
-12,-11	+	2	2	1	+
-14,-13	1	4	2	1	+
-16,-15	1	3	2	1	+
-18,-17	1	4	2	1	+
-20,-19	2	5	2	1	+
-22,-21	1	3	2	+	+
-24,-23	1	5	2	+	+
-26,-25	1	3	1	+	+
≤-27	5	11	4	1	+

Cape Lisburne

19166 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	3	4	4	3	1
-14,-13	1	2	1	+	+
-16,-15	1	2	1	+	+
-18,-17	1	3	1	+	+
-20,-19	2	4	3	+	+
-22,-21	1	5	3	+	+
-24,-23	1	6	5	1	+
-26,-25	1	4	3	+	+
-28,-27	2	4	3	+	+
-30,-29	2	4	2	+	+
≤-31	4	4	2	+	+

Point Lay

3327 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	2	8	4	[illegible]	+
-20,-19	1	2	[illegible]	[illegible]	[illegible]
-22,-21	[illegible]	2	2	[illegible]	+
-24,-23	1	3	3	[illegible]	+
-26,-25	1	2	2	[illegible]	+
-28,-27	1	4	3	[illegible]	+
-30,-29	1	5	4	[illegible]	+
-32,-31	1	4	3	[illegible]	+
-34,-33	1	4	3	[illegible]	[illegible]
-36,-35	1	3	2	+	[illegible]
≤-37	3	6	3	+	+

Barrow

18810 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	+	4	4	1	+
-20,-19	+	3	3	+	+
-22,-21	+	3	3	+	+
-24,-23	1	6	6	1	+
-26,-25	+	5	5	+	0
-28,-27	1	9	6	+	0
-30,-29	1	9	4	+	0
-32,-31	1	6	2	+	0
-34,-33	+	6	1	0	0
-36,-35	+	3	1	0	0
≤-37	+	4	1	0	0

Lonely

3494 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	2	4	3	1	+
-20,-19	1	2	2	1	+
-22,-21	+	3	2	+	+
-24,-23	1	4	4	1	+
-26,-25	1	4	3	1	+
-28,-27	2	6	3	+	+
-30,-29	3	7	3	+	+
-32,-31	2	5	1	+	0
-34,-33	2	5	1	+	0
-36,-35	2	4	+	0	0
≤-37	4	9	+	0	0

Oliktok

3344 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	1	4	3	1	+
-20,-19	1	2	2	1	+
-22,-21	+	2	2	1	+
-24,-23	1	3	4	1	+
-26,-25	1	3	4	1	0
-28,-27	2	4	4	1	+
-30,-29	2	6	4	+	+
-32,-31	1	4	2	+	0
-34,-33	2	5	2	+	0
-36,-35	1	5	1	+	0
≤-37	3	9	3	0	0

Barter

18626 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	[illegible]	4	4	2	[illegible]
-20,-19	[illegible]	2	3	[illegible]	+
-22,-21	[illegible]	2	3	[illegible]	+
-24,-23	1	4	4	[illegible]	+
-26,-25	[illegible]	4	4	[illegible]	+
-28,-27	[illegible]	6	6	[illegible]	+
-30,-29	[illegible]	5	5	[illegible]	+
-32,-31	1	4	3	+	+
-34,-33	1	4	3	+	+
-36,-35	[illegible]	3	1	+	+
≤-37	1	4	[illegible]	+	+

Tuktoyaktuk

3100 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	1	5	5	+	+
-20,-19	1	3	2	+	+
-22,-21	1	3	2	+	0
-24,-23	1	5	5	+	0
-26,-25	1	5	4	+	0
-28,-27	2	6	5	+	0
-30,-29	2	7	4	+	0
-32,-31	2	5	2	+	0
-34,-33	2	6	2	0	0
-36,-35	1	4	1	0	0
≤-37	1	4	1	0	0

Cape Parry

19837 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	1	3	3	+	+
-20,-19	1	2	2	+	+
-22,-21	1	2	2	+	0
-24,-23	2	3	4	1	+
-26,-25	2	3	4	1	+
-28,-27	4	5	6	1	+
-30,-29	3	5	5	1	+
-32,-31	3	4	3	+	0
-34,-33	3	4	3	+	0
-36,-35	2	3	1	+	0
≤-37	2	3	1	+	0

Clinton Point

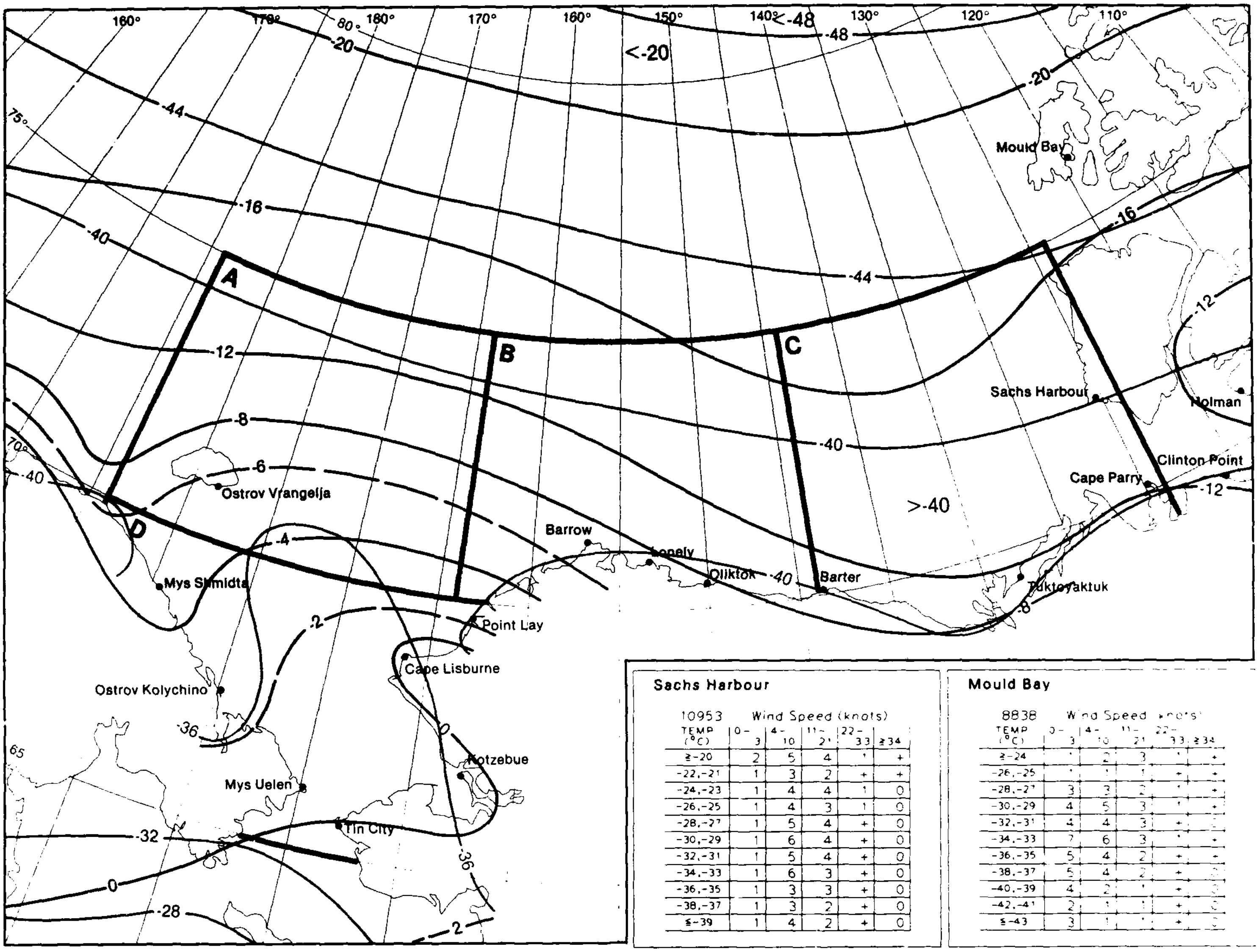
4702 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	1	3	4	+	+
-22,-21	+	2	2	+	+
-24,-23	1	5	4	+	0
-26,-25	1	5	4	+	0
-28,-27	2	7	5	1	0
-30,-29	2	8	5	+	0
-32,-31	2	6	2	+	0
-34,-33	3	7	3	+	0
-36,-35	1	4	1	+	0
-38,-37	1	3	+	0	0
≤-39	+	3	+	0	0

Holman

3212 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	2	2	[illegible]	[illegible]	+
-18,-17	2	1	[illegible]	+	+
-20,-19	2	2	[illegible]	[illegible]	+
-22,-21	2	2	2	[illegible]	+
-24,-23	4	4	2	[illegible]	[illegible]
-26,-25	3	4	2	2	+
-28,-27	4	5	3	2	+
-30,-29	4	6	3	1	+
-32,-31	3	4	1	1	+
-34,-33	3	4	1	[illegible]	+
≥-35	2	3	1	+	+



Sachs Harbour

10953 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-20	2	5	4	1	+
-22,-21	1	3	2	+	+
-24,-23	1	4	4	1	0
-26,-25	1	4	3	1	0
-28,-27	1	5	4	+	0
-30,-29	1	6	4	+	0
-32,-31	1	5	4	+	0
-34,-33	1	6	3	+	0
-36,-35	1	3	3	+	0
-38,-37	1	3	2	+	0
≤-39	1	4	2	+	0

Mould Bay

8838 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-24	1	2	3	1	+
-26,-25	1	1	1	+	+
-28,-27	3	3	2	1	+
-30,-29	4	5	3	1	+
-32,-31	4	4	3	+	0
-34,-33	7	6	3	1	+
-36,-35	5	4	2	+	+
-38,-37	5	4	2	+	0
-40,-39	4	2	1	+	0
-42,-41	2	1	1	+	0
≤-43	3	1	1	+	0

Marine Area A

297 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	+	6	9	2	0
-20,-19	+	2	2	0	0
-22,-21	1	3	2	+	0
-24,-23	+	3	3	+	0
-26,-25	+	3	3	1	0
-28,-27	+	5	3	+	0
-30,-29	+	9	2	0	0
-32,-31	2	5	3	0	0
-34,-33	1	6	1	0	0
-36,-35	+	7	3	0	0
≤-37	2	5	1	0	0

Marine Area B

56 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	0	0	5	2	0
-16,-15	0	5	2	0	0
-18,-17	2	5	13	0	0
-20,-19	0	4	7	0	0
-22,-21	0	2	2	0	0
-24,-23	0	4	2	0	0
-26,-25	0	7	2	0	0
-28,-27	0	4	2	0	0
-30,-29	2	0	5	0	0
-32,-31	0	13	5	0	0
≤-33	4	4	0	0	0

Marine Area C

350 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	1	1	1	0
-18,-17	0	1	1	1	0
-20,-19	+	1	1	1	1
-22,-21	0	2	3	2	+
-24,-23	1	3	5	2	0
-26,-25	4	9	9	1	0
-28,-27	3	12	5	1	0
-30,-29	1	6	5	+	0
-32,-31	2	5	1	+	0
-34,-33	1	2	1	0	0
≤-35	1	1	1	0	0

Marine Area D

101 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	0	6	1	1	0
-6,-5	0	6	5	1	0
-8,-7	0	2	0	0	0
-10,-9	1	4	3	1	0
-12,-11	0	2	5	2	0
-14,-13	0	2	9	1	0
-16,-15	0	3	7	8	1
-18,-17	0	2	6	2	1
-20,-19	0	1	1	0	1
-22,-21	0	2	0	0	0
≤-23	0	2	6	5	1

7 Air Temperature Extremes

Ostrov Vrangelja

4427 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	3	3	+	+
-12,-11	1	2	2	1	+
-14,-13	2	2	2	1	+
-16,-15	3	3	3	1	+
-18,-17	4	5	4	3	+
-20,-19	3	3	2	2	+
-22,-21	5	4	3	2	+
-24,-23	5	3	2	1	+
-26,-25	5	2	1	+	+
-28,-27	4	1	+	+	0
≤-29	3	+	0	0	+

Mys Shmidta

4665 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	5	3	1	0
-12,-11	1	2	1	+	+
-14,-13	1	2	2	+	+
-16,-15	2	3	3	+	+
-18,-17	2	5	4	1	+
-20,-19	2	3	3	1	+
-22,-21	3	5	5	1	+
-24,-23	3	5	4	1	+
-26,-25	3	4	3	+	+
-28,-27	3	3	2	+	+
≤-29	4	2	+	+	0

Ostrov Kolychino

2719 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	5	5	1	+
-10,-9	+	1	2	+	0
-12,-11	1	2	2	+	0
-14,-13	1	3	2	+	0
-16,-15	1	4	3	1	0
-18,-17	1	5	4	1	+
-20,-19	2	4	3	1	+
-22,-21	2	6	5	1	0
-24,-23	2	7	3	+	+
-26,-25	2	5	1	+	+
≤-27	2	7	1	+	0

Mys Uelen

4644 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	2	4	[illegible]	2	[illegible]
-8,-7	2	2	2	+	+
-10,-9	1	[illegible]	[illegible]	+	0
-12,-11	2	3	2	+	0
-14,-13	2	3	2	+	0
-16,-15	[illegible]	3	4	+	0
-18,-17	3	6	6	+	0
-20,-19	2	4	3	+	+
-22,-21	3	4	3	+	0
-24,-23	3	3	2	+	0
≤-25	4	3	2	+	[illegible]

Tin City

19252 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	2	5	9	3	+
-6,-5	+	1	3	1	+
-8,-7	+	1	3	1	+
-10,-9	+	2	3	2	+
-12,-11	+	1	3	2	+
-14,-13	1	2	4	3	+
-16,-15	1	1	5	3	+
-18,-17	1	2	5	4	+
-20,-19	+	1	5	4	+
-22,-21	+	+	3	3	+
≤-23	+	+	4	3	+

Kotzebue

21265 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	1	5	6	2	+
-4,-3	1	3	3	1	+
-6,-5	1	3	2	+	+
-8,-7	1	5	3	1	+
-10,-9	1	5	3	1	+
-12,-11	1	3	2	1	+
-14,-13	1	5	3	1	+
-16,-15	1	3	2	+	0
-18,-17	1	4	2	+	+
-20,-19	1	4	2	+	+
≤-21	3	9	2	+	+

Cape Lisburne

19118 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	2	5	6	3	+
-8,-7	1	2	1	1	+
-10,-9	1	3	1	+	+
-12,-11	2	2	1	+	+
-14,-13	3	5	2	+	+
-16,-15	2	5	2	+	+
-18,-17	3	5	3	+	+
-20,-19	2	6	3	+	0
-22,-21	2	5	3	+	0
-24,-23	2	4	2	+	+
≤-25	2	3	2	+	+

Point Lay

3158 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	[illegible]	5	+	+
-12,-11	[illegible]	2	[illegible]	+	+
-14,-13	[illegible]	3	2	+	+
-16,-15	1	4	2	+	+
-18,-17	[illegible]	4	3	+	+
-20,-19	2	4	3	+	+
-22,-21	1	4	3	+	+
-24,-23	[illegible]	4	4	+	+
-26,-25	[illegible]	3	2	+	+
-28,-27	1	3	2	+	+
≤-29	2	6	2	[illegible]	[illegible]

Barrow

18230 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	6	6	+	0
-12,-11	+	2	2	+	0
-14,-13	+	4	4	+	0
-16,-15	+	4	3	+	+
-18,-17	1	5	4	+	+
-20,-19	1	7	4	+	0
-22,-21	1	6	3	+	0
-24,-23	1	7	4	+	0
-26,-25	1	5	2	+	0
-28,-27	1	6	1	+	0
≤-29	+	6	1	+	0

Lonely

3311 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	6	3	1	+
-12,-11	1	2	1	+	+
-14,-13	2	4	2	1	+
-16,-15	1	4	2	+	+
-18,-17	1	5	2	1	+
-20,-19	2	6	2	+	+
-22,-21	2	5	2	1	+
-24,-23	2	6	3	+	0
-26,-25	2	4	1	+	+
-28,-27	2	4	1	+	+
≤-29	3	8	1	+	0

Oliktok

3205 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	5	4	1	+
-12,-11	1	2	1	+	0
-14,-13	1	3	2	1	0
-16,-15	1	3	2	+	0
-18,-17	2	5	2	+	+
-20,-19	2	5	3	+	0
-22,-21	1	5	3	1	+
-24,-23	2	5	3	+	0
-26,-25	2	4	2	+	+
-28,-27	1	5	2	+	+
≤-29	2	8	2	+	0

Barter

18134 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	8	5	+	+
-12,-11	[illegible]	4	2	+	+
-14,-13	[illegible]	4	[illegible]	+	+
-16,-15	[illegible]	3	3	+	+
-18,-17	[illegible]	5	4	+	+
-20,-19	[illegible]	[illegible]	4	+	+
-22,-21	1	4	3	+	+
-24,-23	[illegible]	5	3	+	+
-26,-25	1	3	2	+	+
-28,-27	[illegible]	4	2	+	+
≤-29	[illegible]	6	2	+	+

Tuktoyaktuk

3153 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	7	5	+	+
-10,-9	1	4	2	+	+
-12,-11	+	2	2	+	0
-14,-13	1	4	4	+	0
-16,-15	1	4	2	+	0
-18,-17	1	5	4	+	0
-20,-19	1	6	3	+	0
-22,-21	1	4	2	+	0
-24,-23	2	5	2	+	0
-26,-25	1	3	1	+	0
≤-27	3	9	2	+	0

Cape Perry

19195 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	5	6	1	+
-12,-11	1	2	2	+	+
-14,-13	1	2	3	1	+
-16,-15	1	2	3	1	+
-18,-17	2	3	5	1	+
-20,-19	2	4	4	1	+
-22,-21	2	3	3	1	+
-24,-23	3	4	3	+	0
-26,-25	2	3	2	+	+
-28,-27	2	3	2	+	+
≤-29	3	4	2	+	+

Clinton Point

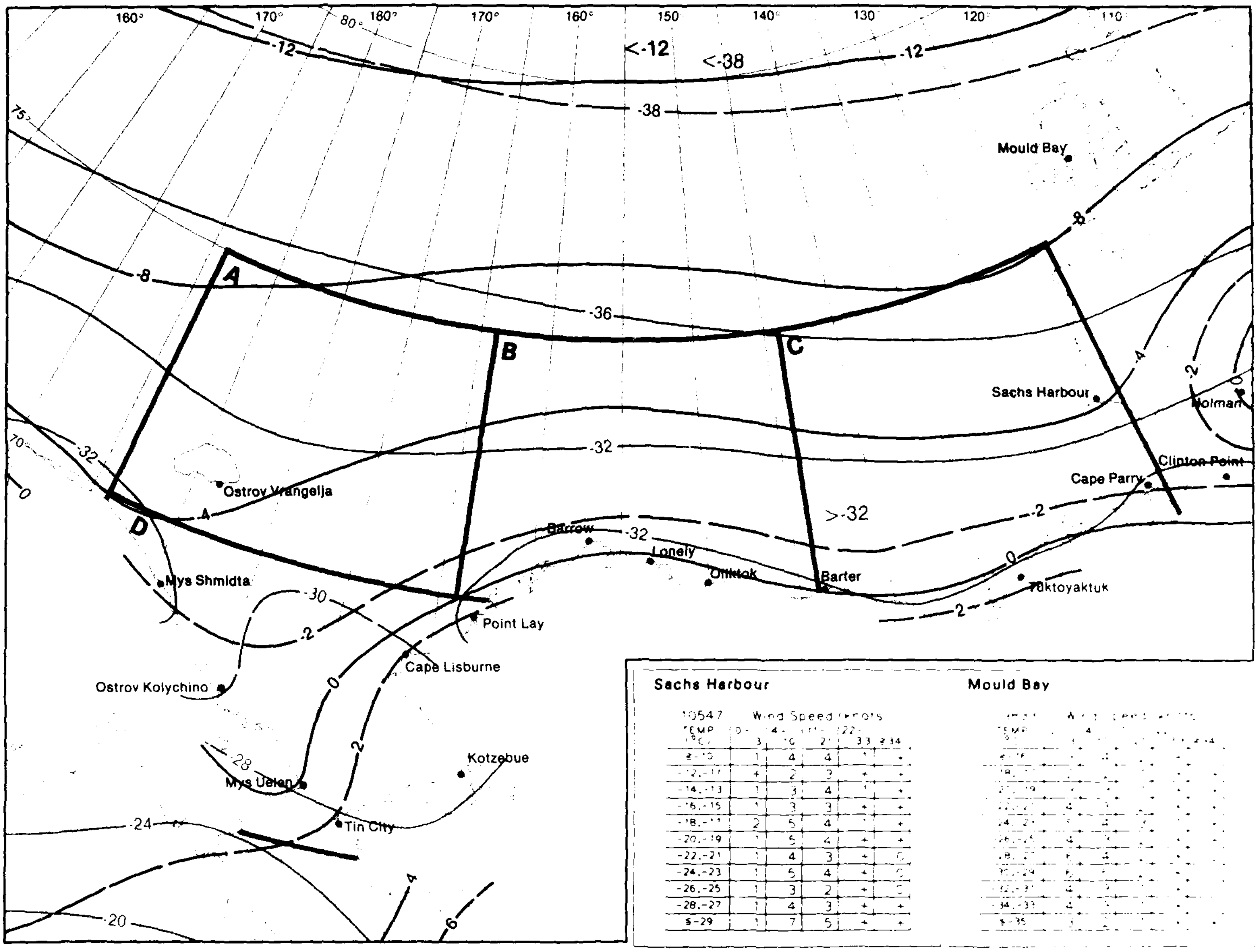
4456 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	9	5	+	0
-12,-11	1	3	1	+	0
-14,-13	1	3	2	1	+
-16,-15	1	4	2	+	0
-18,-17	1	3	4	1	+
-20,-19	1	6	4	1	0
-22,-21	1	4	3	+	0
-24,-23	2	5	2	+	0
-26,-25	1	4	1	1	0
-28,-27	2	4	1	+	0
≤-29	3	8	1	+	0

Holman

3106 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	4	3	3	+	+
-10,-9	2	2	[illegible]	+	+
-12,-11	2	[illegible]	[illegible]	+	+
-14,-13	3	4	[illegible]	+	+
-16,-15	2	2	2	+	+
-18,-17	4	4	3	+	+
-20,-19	5	4	3	+	+
-22,-21	3	4	2	+	+
-24,-23	4	4	2	+	+
-26,-25	2	3	1	+	+
≤-27	4	5	2	+	+



Sachs Harbour

10547 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	4	4	1	+
-12,-11	+	2	3	+	+
-14,-13	1	3	4	1	+
-16,-15	1	3	3	+	+
-18,-17	2	5	4	1	+
-20,-19	1	5	4	+	+
-22,-21	1	4	3	+	0
-24,-23	1	5	4	+	0
-26,-25	1	3	2	+	0
-28,-27	1	4	3	+	+
≤-29	1	7	5	+	+

Mould Bay

[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-18,-17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-20,-19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-22,-21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-24,-23	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-26,-25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-28,-27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-30,-29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-32,-31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-34,-33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
≤-35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Marine Area A

279 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	1	12	5	1	0
-16,-15	+	4	2	0	0
-18,-17	1	3	3	0	0
-20,-19	+	2	+	0	0
-22,-21	0	1	1	0	0
-24,-23	3	6	3	0	0
-26,-25	0	9	1	0	0
-28,-27	1	9	2	0	0
-30,-29	1	13	1	0	0
-32,-31	+	8	1	0	0
≤-33	1	5	0	0	0

Marine Area B

192 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	0	5	9	1	0
-8,-7	1	1	3	0	0
-10,-9	0	1	3	0	1
-12,-11	0	1	6	1	0
-14,-13	0	0	5	4	0
-16,-15	0	1	5	4	0
-18,-17	0	0	4	4	0
-20,-19	1	4	7	4	1
-22,-21	1	8	6	3	2
-24,-23	0	4	3	1	3
≤-25	0	1	0	0	0

Marine Area C

255 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	2	1	4	1	0
-8,-7	2	2	3	+	0
-10,-9	1	8	4	0	0
-12,-11	1	4	5	1	0
-14,-13	1	3	3	1	0
-16,-15	1	4	4	1	0
-18,-17	2	4	3	+	1
-20,-19	2	3	3	2	+
-22,-21	+	4	2	2	1
-24,-23	+	3	2	3	0
≤-25	1	5	1	0	0

Marine Area D

[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-2,-1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-4,-3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-6,-5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-8,-7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-10,-9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-12,-11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-14,-13	3	[illegible]	[illegible]	[illegible]	[illegible]
-16,-15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-18,-17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
≤-19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Ostrov Vrangelja

4241 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	1	1	+	+	0
0,1	1	2	+	+	+
-2,-1	2	6	2	+	+
-4,-3	4	6	3	1	+
-6,-5	3	7	4	1	+
-8,-7	3	8	5	2	1
-10,-9	3	4	3	1	+
-12,-11	2	4	3	1	+
-14,-13	2	2	2	+	0
-16,-15	1	1	1	+	+
≤-17	2	1	+	+	+

Mys Shmidte

4486 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	2	3	1	+	0
0,1	1	2	1	+	0
-2,-1	2	6	3	+	+
-4,-3	2	8	5	+	+
-6,-5	2	8	4	1	0
-8,-7	2	7	4	+	+
-10,-9	1	3	3	1	+
-12,-11	2	4	3	+	+
-14,-13	1	4	2	+	+
-16,-15	1	2	1	+	0
≤-17	2	2	1	+	0

Ostrov Kolychino

2906 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	1	+	0	0
2,3	1	1	2	+	0
0,1	+	3	3	+	0
-2,-1	1	7	4	1	+
-4,-3	2	9	5	1	+
-6,-5	2	9	5	+	+
-8,-7	1	7	4	1	+
-10,-9	1	4	2	+	0
-12,-11	1	5	2	+	0
-14,-13	+	5	3	+	0
≤-15	+	4	2	+	0

Mys Uelen

4512 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	+	+	0	0
2,3	1	1	1	+	+
0,1	3	4	3	1	+
-2,-1	3	9	1	1	+
-4,-3	3	9	6	1	+
-6,-5	2	7	4	+	[illegible]
-8,-7	2	5	3	+	[illegible]
-10,-9	1	3	2	+	[illegible]
-12,-11	1	2	2	+	[illegible]
-14,-13	1	1	1	+	[illegible]
≤-15	1	1	1	+	+

Tin City

20704 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	1	1	+	+	0
4,5	1	1	1	+	0
2,3	1	2	3	+	+
0,1	2	5	9	2	+
-2,-1	1	5	11	3	+
-4,-3	1	4	10	4	+
-6,-5	+	2	5	3	+
-8,-7	1	1	3	2	+
-10,-9	+	1	3	1	0
-12,-11	+	1	2	1	0
≤-13	+	1	2	2	+

Kotzebue

21217 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	2	2	+	0
6,7	+	3	1	+	0
4,5	1	4	2	+	0
2,3	2	11	6	+	0
0,1	3	13	1	1	+
-2,-1	1	7	4	+	0
-4,-3	1	6	3	+	0
-6,-5	1	3	1	+	+
-8,-7	1	2	1	+	0
-10,-9	1	2	1	+	0
≤-11	2	3	2	+	0

Cape Lisburne

20422 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	1	1	+	+	+
4,5	1	1	1	+	+
2,3	2	3	2	1	+
0,1	3	6	4	1	+
-2,-1	3	8	4	1	+
-4,-3	3	10	6	1	+
-6,-5	2	6	4	+	0
-8,-7	1	5	3	+	+
-10,-9	1	3	2	+	0
-12,-11	1	2	1	+	0
≤-13	2	4	2	+	0

Point Lay

3181 Wind Speed (knots)

Barrow

Wind Speed (knots)

Lonely

Wind Speed (knots)

Oliktok

Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	1	1	+	+	+
0,1	2	4	2	+	0
-2,-1	2	6	3	+	+
-4,-3	3	8	4	1	0
-6,-5	2	6	5	1	+
-8,-7	3	6	5	1	+
-10,-9	2	5	4	1	0
-12,-11	1	3	2	+	0
-14,-13	1	3	2	+	0
-16,-15	1	1	1	+	0
≤-17	1	3	1	+	0

Barter

Wind Speed (knots)

Tuktoyaktuk

3303 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	1	1	0	[illegible]
2,3	+	4	2	+	[illegible]
0,1	1	1	4	+	[illegible]
-2,-1	1	6	4	+	0
-4,-3	2	8	6	+	0
-6,-5	1	5	4	+	0
-8,-7	1	6	4	+	0
-10,-9	1	5	3	+	0
-12,-11	1	3	2	+	0
-14,-13	1	3	2	0	0
≤-15	1	5	2	+	0

Cape Parry

Wind Speed (knots)

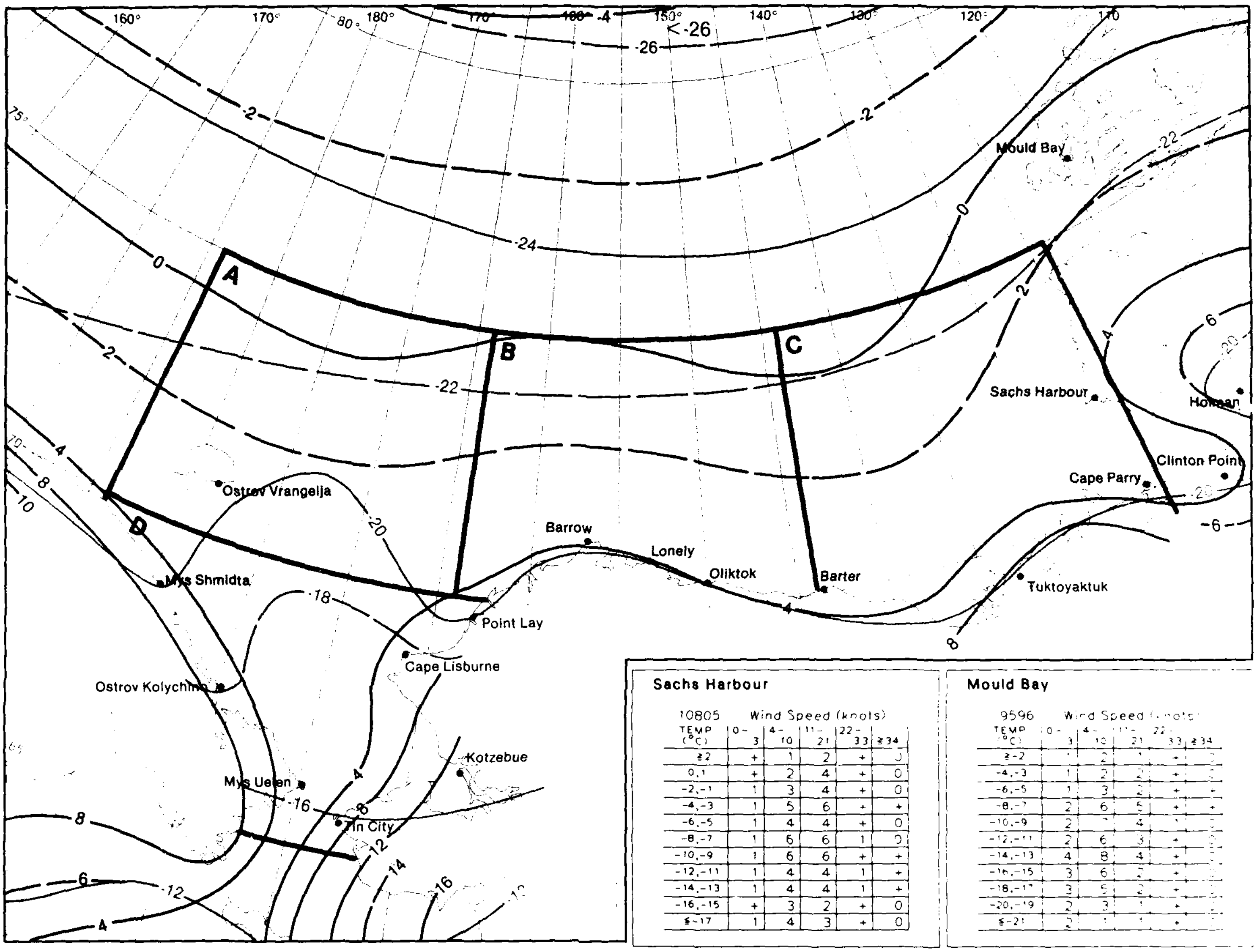
Clinton Point

4420 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	1	0	0
0,1	2	8	4	+	0
-2,-1	1	4	2	+	+
-4,-3	2	5	5	1	0
-6,-5	1	5	3	1	0
-8,-7	2	1	4	1	+
-10,-9	1	5	3	+	+
-12,-11	1	4	2	+	+
-14,-13	1	4	3	+	+
-16,-15	1	3	1	+	+
≤-17	2	8	1	+	0

Holman

Wind Speed (knots)



Sachs Harbour

10805 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	2	+	0
0,1	+	2	4	+	0
-2,-1	1	3	4	+	0
-4,-3	1	5	6	+	+
-6,-5	1	4	4	+	0
-8,-7	1	6	6	1	0
-10,-9	1	6	6	+	+
-12,-11	1	4	4	1	+
-14,-13	1	4	4	1	+
-16,-15	+	3	2	+	0
≤-17	1	4	3	+	0

Mould Bay

9596 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	1	2	1	+	0
-4,-3	1	2	2	+	0
-6,-5	1	3	2	+	+
-8,-7	2	6	5	+	+
-10,-9	2	7	4	1	0
-12,-11	2	6	3	+	0
-14,-13	4	8	4	+	0
-16,-15	3	6	2	+	0
-18,-17	3	5	2	+	0
-20,-19	2	3	1	+	0
≤-21	2	1	1	+	0

Marine Area A

182 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	0	3	2	1	0
-4,-3	1	4	2	0	0
-6,-5	0	4	4	0	0
-8,-7	2	5	9	0	0
-10,-9	1	6	8	0	0
-12,-11	0	5	7	2	0
-14,-13	1	5	5	1	0
-16,-15	1	3	3	0	0
-18,-17	0	4	3	0	0
-20,-19	0	6	1	0	0
≤-21	0	3	0	0	0

Marine Area B

34 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	0	0	0	0	0
-2,-1	0	0	3	0	0
4,-3	0	6	0	0	0
-6,-5	0	9	3	6	0
-8,-7	6	6	3	0	0
-10,-9	3	0	6	6	3
-12,-11	0	0	9	0	0
-14,-13	3	9	12	0	0
-16,-15	0	3	6	0	0
-18,-17	0	0	0	0	0
≤-19	0	0	0	0	0

Marine Area C

424 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	1	+	0	0	0
2,3	1	3	2	0	0
0,1	1	4	1	1	0
-2,-1	2	6	5	+	0
-4,-3	+	3	6	+	0
-6,-5	1	5	3	0	0
-8,-7	1	4	4	+	+
-10,-9	3	8	4	1	1
-12,-11	1	8	6	+	0
-14,-13	1	5	3	+	0
≤-15	+	1	2	0	0

Marine Area D

167 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	0	0	0
6,7	0	0	0	0	0
4,5	0	1	0	0	0
2,3	0	5	5	0	0
0,1	6	14	11	3	0
-2,-1	1	7	13	1	0
-4,-3	1	4	7	5	2
-6,-5	1	5	2	0	1
-8,-7	0	1	2	0	0
-10,-9	0	1	0	0	0
≤-11	0	2	1	0	0

Ostrov Vrangelja

4288 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	0	+	0	0
8,9	0	+	0	0	0
6,7	+	+	+	+	0
4,5	1	2	1	+	+
2,3	6	12	4	+	+
0,1	7	17	5	1	+
-2,-1	7	14	5	+	+
-4,-3	3	6	2	+	+
-6,-5	1	2	1	+	+
-8,-7	+	+	+	+	+
≤-9	0	+	+	0	0

Mys Shmidta

4502 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	1	2	1	0	0
8,9	1	1	1	+	+
6,7	1	2	1	+	0
4,5	1	5	2	+	0
2,3	3	13	6	1	+
0,1	2	17	5	+	+
-2,-1	3	15	4	+	+
-4,-3	1	5	1	+	+
-6,-5	+	2	1	+	+
-8,-7	+	+	+	+	0
≤-9	0	0	0	+	0

Ostrov Kolychino

2764 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	1	2	0	0
8,9	+	1	2	+	0
6,7	1	2	3	+	0
4,5	1	4	5	1	0
2,3	2	9	8	1	0
0,1	3	12	6	+	0
-2,-1	2	14	5	+	0
-4,-3	1	5	2	+	+
-6,-5	1	2	1	+	0
-8,-7	0	1	+	0	0
≤-9	0	+	+	0	0

Mys Uelen

4479 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	+	+	0	0
10,11	+	+	+	+	0
8,9	+	1	1	0	0
6,7	1	2	2	1	0
4,5	2	4	4	1	+
2,3	6	12	8	3	+
0,1	5	10	7	2	+
-2,-1	3	9	6	1	+
-4,-3	1	2	2	+	0
-6,-5	+	+	+	+	0
≤-7	0	0	0	0	0

Tin City

19939 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	1	1	+	+	0
10,11	1	2	1	+	0
8,9	1	2	2	+	0
6,7	2	5	4	+	+
4,5	2	5	5	1	+
2,3	2	8	11	2	0
0,1	2	9	14	3	+
-2,-1	1	4	6	1	+
-4,-3	+	1	2	1	0
-6,-5	+	+	+	+	0
≤-7	0	+	0	0	0

Kotzebue

20512 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	2	1	+	0
14,15	+	2	1	+	0
12,13	+	4	2	+	0
10,11	1	6	4	+	0
8,9	1	5	4	+	0
6,7	1	8	6	+	0
4,5	1	7	5	+	0
2,3	1	10	7	1	0
0,1	1	7	7	1	+
-2,-1	+	1	2	+	0
≤-3	+	+	+	+	0

Cape Lisburne

19396 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	1	+	+
10,11	1	1	1	1	+
8,9	1	2	2	1	+
6,7	4	4	2	1	+
4,5	4	5	2	1	+
2,3	8	11	3	1	+
0,1	8	15	5	+	+
-2,-1	2	7	2	+	+
-4,-3	1	1	1	+	+
-6,-5	+	+	+	0	0
≤-7	+	+	+	0	0

Point Lay

3124 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	2	1	+	0
12,13	1	2	1	+	0
10,11	1	4	1	+	0
8,9	1	5	2	+	0
6,7	2	7	2	+	0
4,5	2	8	2	1	+
2,3	3	12	5	1	+
0,1	3	12	5	1	0
-2,-1	1	4	2	+	0
-4,-3	+	1	1	+	+
≤-5	+	1	+	0	0

Barrow

17498 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	1	1	0	0
8,9	+	1	+	+	0
6,7	+	2	1	+	0
4,5	+	3	2	+	0
2,3	1	8	6	+	0
0,1	1	23	15	+	0
-2,-1	1	12	9	+	+
-4,-3	+	5	5	+	0
-6,-5	+	1	1	+	0
-8,-7	+	+	+	+	0
≤-9	+	+	+	+	0

Lonely

3194 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	1	2	+	+	0
8,9	+	1	+	0	0
6,7	1	3	1	+	0
4,5	1	5	2	+	0
2,3	3	12	4	+	0
0,1	5	22	9	1	0
-2,-1	2	9	4	1	0
-4,-3	+	3	2	+	0
-6,-5	+	1	1	+	0
-8,-7	+	1	+	0	0
≤-9	+	+	0	0	0

Oliktok

3131 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	1	1	+	0	0
8,9	1	1	+	0	0
6,7	1	3	1	+	0
4,5	2	5	2	+	0
2,3	3	13	7	+	0
0,1	5	19	11	1	+
-2,-1	1	8	5	+	+
-4,-3	1	2	2	+	+
-6,-5	+	1	1	+	0
-8,-7	+	1	+	+	0
≤-9	0	+	0	0	0

Barter

17672 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	1	+	0	0
8,9	+	1	+	+	0
6,7	+	2	1	+	0
4,5	1	3	2	+	0
2,3	1	11	7	+	0
0,1	3	25	16	1	+
-2,-1	1	8	8	1	0
-4,-3	+	3	3	+	0
-6,-5	+	+	1	+	0
-8,-7	+	+	+	0	0
≤-9	0	+	+	0	0

Tuktoyaktuk

31[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	5	2	0	0
12,13	+	2	2	0	0
10,11	+	4	2	+	0
8,9	+	3	3	+	0
6,7	1	6	4	+	0
4,5	1	6	3	+	0
2,3	1	11	7	+	0
0,1	1	14	7	+	0
-2,-1	+	5	2	+	0
-4,-3	+	3	1	0	0
≤-5	+	1	+	0	0

Cape Parry

18718 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	1	1	1	+	0
8,9	1	1	1	+	0
6,7	1	2	2	+	0
4,5	1	4	4	+	0
2,3	2	9	10	1	0
0,1	3	13	15	2	+
-2,-1	1	7	6	+	0
-4,-3	1	3	3	1	+
-6,-5	+	1	1	+	+
-8,-7	+	+	1	+	0
≤-9	+	+	+	+	0

Clinton Point

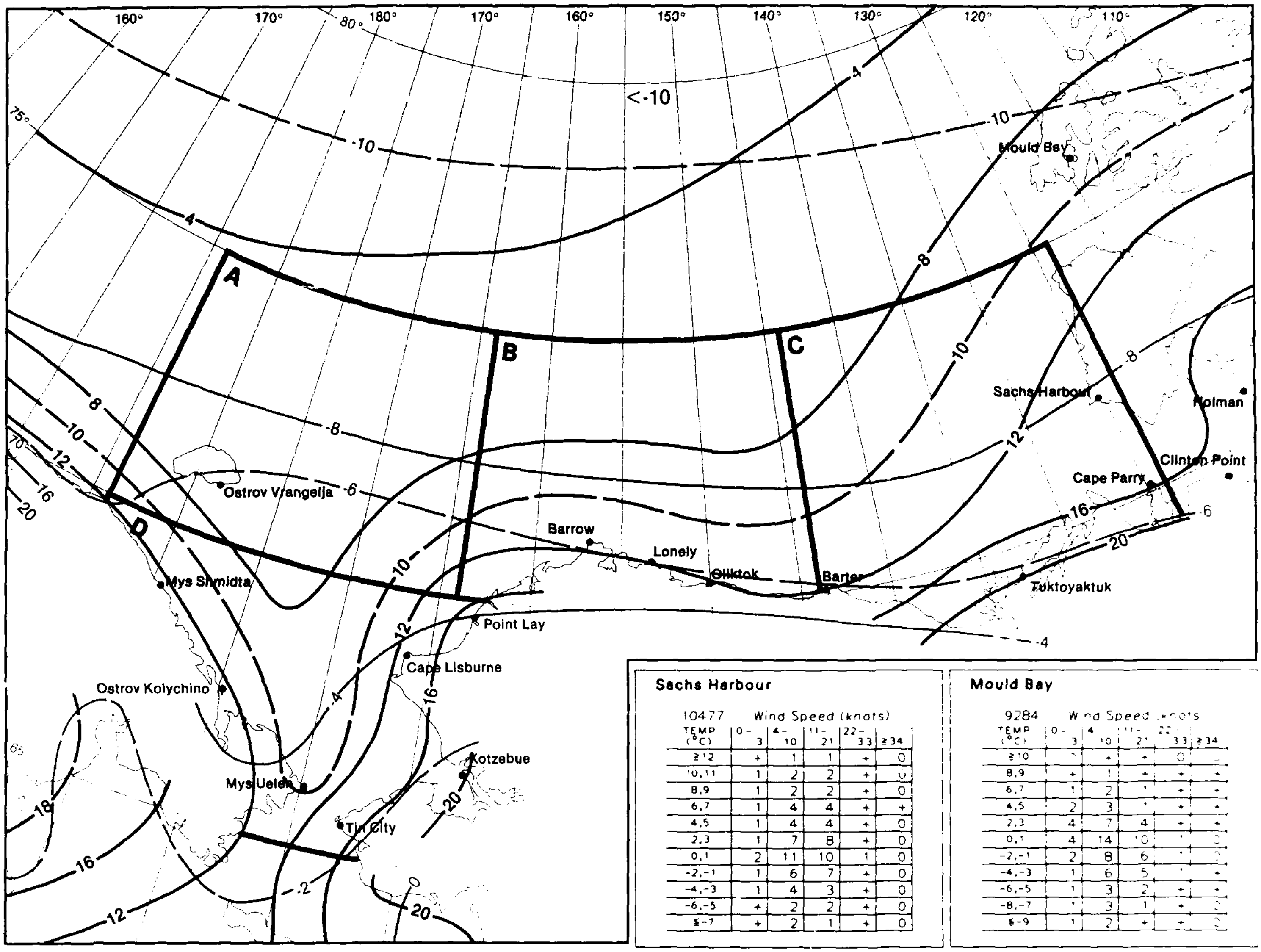
4450 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥
≥12	+	2	1	+	0
10,11	+	2	1	0	0
8,9	+	2	1	0	0
6,7	1	4	1	+	0
4,5	1	6	2	+	0
2,3	3	14	6	+	0
0,1	5	18	7	1	0
-2,-1	2	7	2	+	0
-4,-3	1	3	2	0	0
-6,-5	+	2	1	0	0
≤-7	1	2	1	0	0

Holman

3110 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	1	2	2	+	0
10,11	2	1	1	+	0
8,9	2	2	1	+	0
6,7	2	5	2	+	0
4,5	2	5	2	+	+
2,3	4	9	5	1	+
0,1	6	13	6	2	+
-2,-1	3	6	2	+	0
-4,-3	2	3	1	+	0
-6,-5	1	1	1	+	0
≤-7	+	1	1	+	0



Sachs Harbour

10477 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	1	+	0
10,11	1	2	2	+	0
8,9	1	2	2	+	0
6,7	1	4	4	+	+
4,5	1	4	4	+	0
2,3	1	7	8	+	0
0,1	2	11	10	1	0
-2,-1	1	6	7	+	0
-4,-3	1	4	3	+	0
-6,-5	+	2	2	+	0
≤-7	+	2	1	+	0

Mould Bay

9284 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	[illegible]	+	+	0	0
8,9	+	1	+	+	+
6,7	1	2	[illegible]	+	+
4,5	2	3	[illegible]	+	+
2,3	4	7	4	+	+
0,1	4	14	10	[illegible]	0
-2,-1	2	8	6	[illegible]	0
-4,-3	1	6	5	[illegible]	+
-6,-5	1	3	2	+	+
-8,-7	[illegible]	3	1	+	0
≤-9	1	2	+	+	0

Marine Area A

100 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	1	1	0	0
6,7	1	3	0	0	0
4,5	1	3	2	0	0
2,3	0	2	11	0	0
0,1	1	17	13	1	1
-2,-1	1	18	4	1	0
-4,-3	3	9	0	2	0
-6,-5	1	2	1	0	0
-8,-7	0	0	0	0	0
≤-9	0	0	0	0	0

Marine Area B

No Data Available

Marine Area C

623 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	2	2	0	0
12,13	+	1	1	0	0
10,11	+	3	2	+	0
8,9	1	2	3	+	0
6,7	1	4	6	+	0
4,5	2	7	10	1	0
2,3	1	8	12	4	0
0,1	+	8	11	1	+
-2,-1	0	3	2	0	0
-4,-3	+	+	1	0	0
≤-5	0	+	0	0	0

Marine Area D

514 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	+	+	0	0
12,13	0	+	0	+	0
10,11	+	2	+	0	+
8,9	1	3	2	+	0
6,7	3	6	4	+	0
4,5	3	13	8	+	0
2,3	3	13	11	2	+
0,1	1	9	7	2	0
-2,-1	+	1	[illegible]	[illegible]	0
-4,-3	0	0	+	0	0
≤-5	0	0	0	0	0

Ostrov Vrangelja

4253 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	+	+	+	0
10,11	+	+	+	0	0
8,9	+	1	1	+	0
6,7	1	2	1	+	0
4,5	2	7	4	+	0
2,3	8	21	9	1	+
0,1	9	14	5	+	+
-2,-1	5	6	2	+	0
-4,-3	+	1	+	+	0
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

Mys Shmidta

4499 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	1	2	1	+	0
12,13	1	2	1	+	0
10,11	+	1	1	+	0
8,9	1	2	1	+	0
6,7	1	5	2	+	0
4,5	2	9	3	+	0
2,3	4	23	9	1	0
0,1	2	12	6	1	0
-2,-1	1	3	2	+	0
-4,-3	+	+	0	0	0
≤-5	0	0	0	0	0

Ostrov Kolychino

2581 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	2	+	+
12,13	1	2	2	+	0
10,11	+	2	3	1	+
8,9	1	3	6	1	0
6,7	1	4	6	2	0
4,5	2	6	6	1	+
2,3	3	12	6	1	0
0,1	2	11	3	+	+
-2,-1	1	6	3	+	0
-4,-3	+	+	0	0	0
≤-5	0	0	0	0	0

Mys Uelen

4497 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	1	+	0
12,13	+	1	2	+	0
10,11	1	2	2	+	0
8,9	1	3	5	3	+
6,7	3	5	7	5	+
4,5	4	8	6	4	+
2,3	4	11	8	+	+
0,1	1	3	2	+	+
-2,-1	+	+	+	+	0
-4,-3	0	0	0	0	0
≤-5	0	0	0	0	0

Tin City

20635 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	1	1	+	0	0
14,15	+	1	1	0	0
12,13	1	3	2	+	0
10,11	2	5	3	+	+
8,9	2	6	7	1	+
6,7	2	10	15	2	+
4,5	1	7	12	2	+
2,3	+	3	6	1	+
0,1	+	+	2	+	+
-2,-1	+	+	+	+	0
≤-3	0	0	0	0	0

Kotzebue

21130 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	2	1	+	0
18,19	+	2	1	+	0
16,17	1	5	3	+	0
14,15	1	7	4	+	0
12,13	1	11	8	1	0
10,11	1	11	11	1	+
8,9	+	5	6	1	0
6,7	+	4	6	1	+
4,5	+	1	3	1	+
2,3	+	+	1	+	0
≤1	+	+	+	+	0

Cape Lisburne

19393 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	1	1	+	0
14,15	1	1	1	+	+
12,13	2	2	2	1	+
10,11	3	5	4	2	+
8,9	4	6	4	2	+
6,7	5	9	5	1	+
4,5	4	7	3	1	+
2,3	4	9	3	+	+
0,1	2	4	1	+	+
-2,-1	+	+	+	0	0
≤-3	0	0	0	0	0

Point Lay

3015 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	1	1	+	0
16,17	+	2	+	+	0
14,15	1	2	+	+	0
12,13	2	5	2	+	0
10,11	3	9	4	+	0
8,9	2	7	5	+	0
6,7	2	9	5	+	0
4,5	2	8	3	+	0
2,3	2	7	4	+	0
0,1	1	3	1	+	0
≤-1	+	+	+	0	0

Barrow

18772 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	2	2	+	0
10,11	+	2	2	+	0
8,9	+	3	2	+	0
6,7	1	5	4	+	0
4,5	1	6	5	+	0
2,3	1	12	10	+	+
0,1	1	19	14	+	0
-2,-1	1	5	2	+	0
-4,-3	+	+	+	0	0
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

Lonely

3136 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	1	3	1	+	0
12,13	+	2	1	+	0
10,11	1	4	1	0	0
8,9	1	3	1	+	0
6,7	2	7	3	+	0
4,5	2	8	4	+	0
2,3	3	17	7	1	+
0,1	3	15	5	1	0
-2,-1	1	3	1	+	0
-4,-3	+	+	0	0	0
≤-5	0	0	0	0	0

Oliktok

3047 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	1	3	+	0	0
12,13	1	3	1	0	0
10,11	1	3	1	+	0
8,9	1	3	1	+	0
6,7	2	7	4	1	0
4,5	3	8	7	1	+
2,3	3	14	10	1	+
0,1	2	11	4	+	0
-2,-1	+	2	1	0	0
-4,-3	+	+	0	0	0
≤-5	0	0	0	0	0

Barter

18342 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	+	0	0
12,13	+	1	+	+	0
10,11	1	3	1	+	0
8,9	1	4	2	+	0
6,7	1	7	4	+	0
4,5	1	8	6	+	+
2,3	2	16	10	+	0
0,1	2	15	8	+	0
-2,-1	+	2	1	+	0
-4,-3	+	+	+	0	0
≤-5	0	0	0	0	0

Tuktoyaktuk

3215 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	4	1	+	0
18,19	+	3	1	0	0
16,17	+	4	3	+	0
14,15	+	5	3	+	0
12,13	1	7	4	+	0
10,11	1	8	5	+	+
8,9	1	7	4	+	0
6,7	1	9	5	+	0
4,5	1	6	4	+	0
2,3	+	5	3	+	0
≤1	+	2	1	+	0

Cape Parry

19343 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	1	2	1	+	0
12,13	1	2	1	+	0
10,11	1	3	2	+	0
8,9	1	4	3	+	0
6,7	3	8	8	+	0
4,5	2	8	8	+	0
2,3	3	11	10	+	0
0,1	2	6	4	+	0
-2,-1	+	1	+	+	0
-4,-3	+	+	+	0	0
≤-5	0	0	0	0	0

Clinton Point

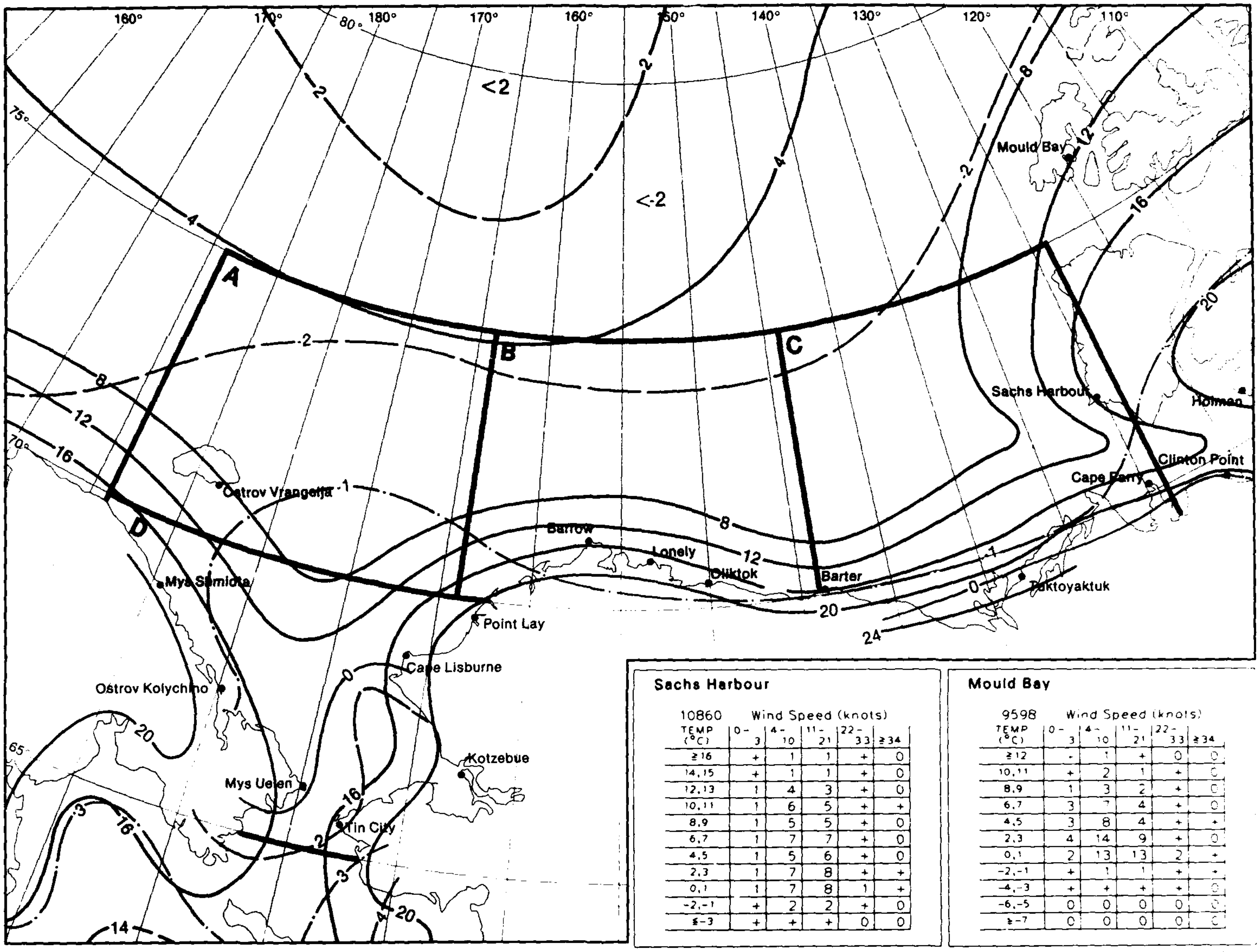
4453 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	3	1	0	0
14,15	+	2	1	0	0
12,13	+	4	1	0	0
10,11	1	6	1	+	0
8,9	1	6	2	+	0
6,7	2	13	4	+	0
4,5	3	11	5	+	0
2,3	2	14	8	1	+
0,1	+	4	3	+	0
-2,-1	+	+	+	+	0
≤-3	+	0	0	0	0

Holman

3213 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	2	3	1	+	0
14,15	1	1	+	+	0
12,13	2	2	1	+	+
10,11	3	5	2	+	+
8,9	3	6	3	+	0
6,7	4	10	5	1	+
4,5	4	9	5	1	+
2,3	4	8	5	1	+
0,1	1	3	2	+	0
-2,-1	+	+	+	0	0
≤-3	0	+	0	0	0



Sachs Harbour

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
10860	Wind Speed (knots)				
≥16	+	1	1	+	0
14,15	+	1	1	+	0
12,13	1	4	3	+	0
10,11	1	6	5	+	+
8,9	1	5	5	+	0
6,7	1	7	7	+	0
4,5	1	5	6	+	0
2,3	1	7	8	+	+
0,1	1	7	8	1	+
-2,-1	+	2	2	+	0
≤-3	+	+	+	0	0

Mould Bay

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
9598	Wind Speed (knots)				
≥12	+	1	+	0	0
10,11	+	2	1	+	0
8,9	1	3	2	+	0
6,7	3	7	4	+	0
4,5	3	8	4	+	+
2,3	4	14	9	+	0
0,1	2	13	13	2	+
-2,-1	+	1	1	+	+
-4,-3	+	+	+	+	0
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

Marine Area A

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
368	Wind Speed (knots)				
≥12	+	1	0	+	0
10,11	1	1	+	+	+
8,9	0	1	2	0	0
6,7	1	5	3	1	0
4,5	2	5	7	1	0
2,3	1	11	11	1	0
0,1	2	14	16	1	0
-2,-1	1	5	3	1	+
-4,-3	1	1	1	0	0
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

Marine Area B

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
2940	Wind Speed (knots)				
≥12	+	+	+	+	0
10,11	+	+	1	1	0
8,9	1	1	1	+	+
6,7	1	4	4	1	0
4,5	2	7	6	1	0
2,3	3	12	11	1	+
0,1	4	18	12	1	+
-2,-1	1	4	2	+	0
-4,-3	0	+	0	0	0
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

Marine Area C

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
3494	Wind Speed (knots)				
≥16	+	2	2	+	+
14,15	+	2	2	+	0
12,13	+	3	4	+	0
10,11	1	5	6	1	+
8,9	1	4	8	2	+
6,7	1	5	8	2	+
4,5	1	7	8	1	+
2,3	1	5	6	1	+
0,1	+	3	3	+	+
-2,-1	+	+	+	+	0
≤-3	0	0	+	0	0

Marine Area D

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
2710	Wind Speed (knots)				
≥16	+	+	1	+	0
14,15	+	1	1	+	0
12,13	1	2	2	+	+
10,11	1	4	4	1	+
8,9	2	6	6	2	+
6,7	2	8	12	3	+
4,5	2	8	10	2	+
2,3	1	4	5	2	+
0,1	+	2	2	+	+
-2,-1	+	+	+	+	0
≤-3	0	0	0	0	0

Ostrov Vrangelja

4252 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	+	+	0	0
10,11	+	+	+	+	0
8,9	+	1	+	+	0
6,7	1	3	1	+	0
4,5	3	7	2	1	+
2,3	8	14	8	2	+
0,1	7	12	5	1	+
-2,-1	5	8	3	1	+
-4,-3	1	2	1	+	+
-6,-5	+	+	+	0	0
≤-7	0	0	0	0	0

Mys Shmidta

4564 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	1	2	1	1	0
10,11	+	2	+	0	0
8,9	1	2	1	+	0
6,7	1	4	2	+	+
4,5	2	8	3	+	0
2,3	3	16	9	1	+
0,1	2	12	7	1	+
-2,-1	2	8	5	1	+
-4,-3	+	1	1	+	0
-6,-5	+	+	0	0	0
≤-7	0	0	0	0	0

Ostrov Kolychino

2530 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	1	0	0
12,13	+	1	1	+	0
10,11	+	2	3	+	0
8,9	1	3	5	1	+
6,7	1	5	6	1	+
4,5	1	8	6	2	+
2,3	2	11	8	1	+
0,1	1	9	7	1	+
-2,-1	1	6	3	+	+
-4,-3	+	+	+	0	0
≤-5	0	0	0	0	0

Mys Uelen

4515 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	+	0
12,13	+	+	1	+	+
10,11	+	1	2	+	+
8,9	1	2	5	2	+
6,7	3	6	7	3	+
4,5	5	12	11	3	+
2,3	4	10	12	2	+
0,1	1	2	2	+	+
-2,-1	+	+	0	+	0
-4,-3	0	0	0	0	0
≤-5	0	0	0	0	0

Tin City

20765 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	0	0
14,15	+	1	1	+	0
12,13	1	2	2	+	0
10,11	1	4	5	1	+
8,9	2	7	9	1	+
6,7	2	12	18	3	+
4,5	1	5	10	2	+
2,3	+	3	4	1	+
0,1	+	1	+	+	+
-2,-1	+	0	0	0	0
≤-3	0	0	+	0	0

Kotzebue

21792 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	+	+	+	0
18,19	+	1	+	+	0
16,17	+	2	2	+	0
14,15	+	4	3	+	0
12,13	1	9	8	+	+
10,11	1	13	13	1	+
8,9	1	8	9	1	+
6,7	1	6	7	1	+
4,5	+	2	2	+	+
2,3	+	1	1	+	0
≤1	0	+	+	+	0

Cape Lisburne

20220 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	1	+	+	0
14,15	+	1	+	+	0
12,13	2	3	1	+	+
10,11	3	5	3	1	+
8,9	4	7	5	1	+
6,7	5	10	7	1	+
4,5	3	9	6	1	+
2,3	2	7	7	1	+
0,1	1	1	2	+	0
-2,-1	+	+	+	+	0
≤-3	0	0	0	0	0

Point Lay

3273 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	1	2	+	+	0
14,15	+	2	+	+	0
12,13	1	5	1	+	0
10,11	2	7	3	+	0
8,9	2	8	3	+	0
6,7	3	10	5	+	+
4,5	3	9	5	+	+
2,3	2	8	3	+	+
0,1	1	5	2	+	0
-2,-1	+	1	1	+	0
≤-3	+	+	+	0	0

Barrow

19325 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	2	1	+	0
10,11	+	2	1	+	0
8,9	+	3	2	+	0
6,7	+	5	4	+	+
4,5	1	7	5	+	+
2,3	1	10	8	1	0
0,1	1	14	13	1	0
-2,-1	1	7	5	+	0
-4,-3	+	2	2	+	0
-6,-5	+	+	+	0	0
≤-7	0	0	0	0	0

Lonely

3372 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	1	3	1	+	0
10,11	1	3	1	+	0
8,9	1	3	1	+	+
6,7	2	7	1	+	0
4,5	2	10	3	+	+
2,3	4	15	6	1	+
0,1	3	15	8	1	+
-2,-1	1	4	2	+	0
-4,-3	+	1	+	+	0
-6,-5	0	+	0	0	0
≤-7	0	0	0	0	0

Oliktok

3289 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	+	0	0
12,13	1	2	1	0	0
10,11	1	4	1	+	0
8,9	1	4	1	+	0
6,7	2	7	4	1	0
4,5	2	8	5	1	0
2,3	3	14	8	1	+
0,1	3	11	7	1	+
-2,-1	1	3	2	+	0
-4,-3	+	+	+	0	0
≤-5	0	0	0	0	0

Barter

18470 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	+	+	0
12,13	+	1	+	+	0
10,11	+	3	1	+	0
8,9	1	4	2	+	+
6,7	1	9	4	+	+
4,5	1	8	5	+	+
2,3	2	12	11	1	+
0,1	1	12	10	2	+
-2,-1	1	3	2	+	+
-4,-3	+	1	+	+	0
≤-5	0	+	0	0	0

Tuktoyaktuk

3201 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	2	1	+	0
16,17	+	3	1	+	0
14,15	+	3	2	+	0
12,13	1	7	3	+	0
10,11	1	9	5	+	0
8,9	1	8	4	+	0
6,7	1	10	6	+	0
4,5	1	7	4	1	0
2,3	1	6	5	1	0
0,1	+	2	2	+	0
≤-1	+	+	+	0	0

Cape Parry

19339 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	+	0	0
12,13	+	1	1	0	0
10,11	1	3	2	+	0
8,9	1	4	3	+	0
6,7	3	8	9	1	0
4,5	2	8	9	1	+
2,3	3	9	9	1	+
0,1	1	5	5	1	0
-2,-1	+	2	2	+	0
-4,-3	+	+	+	+	0
≤-5	0	0	0	0	0

Clinton Point

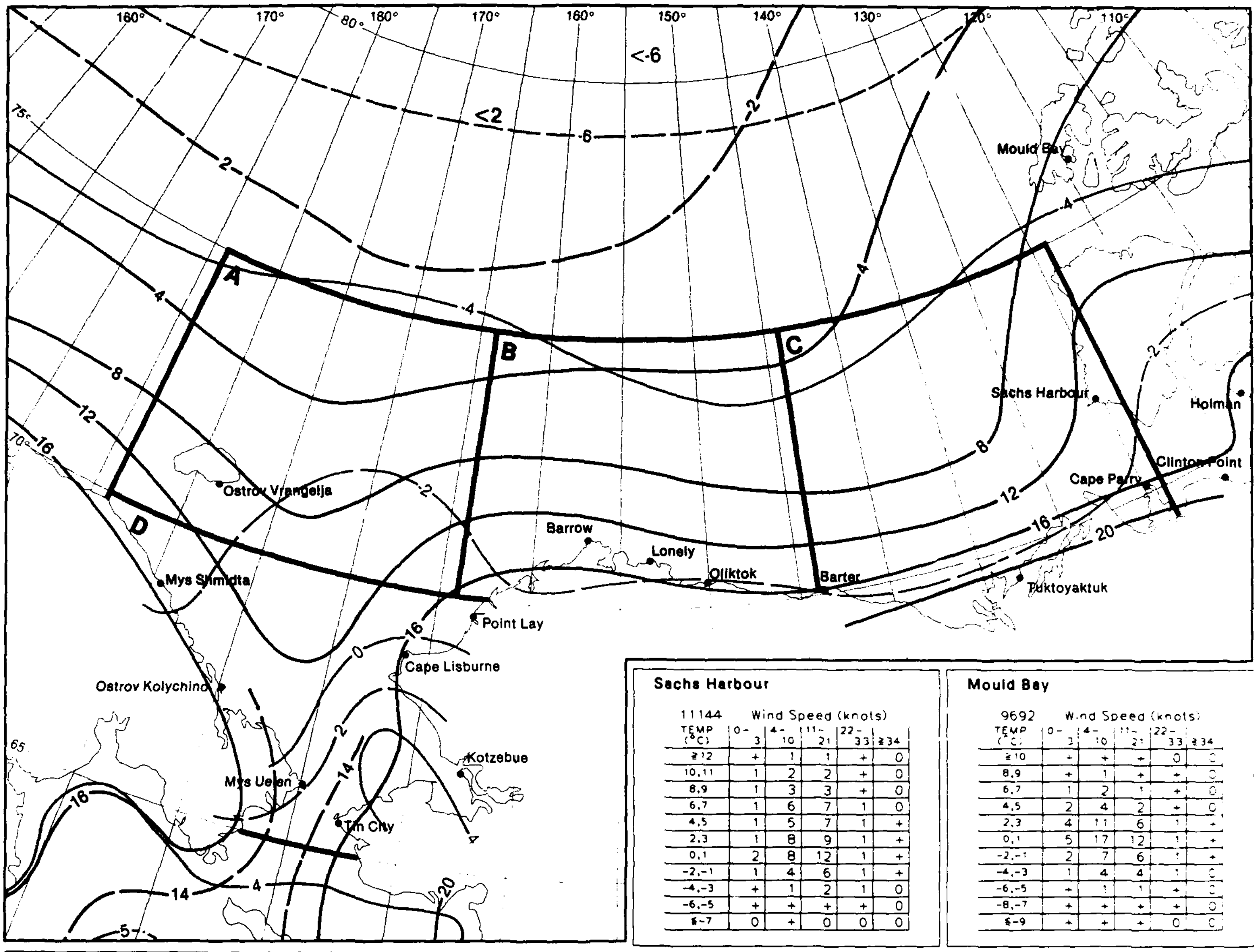
4483 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	2	1	0	0
14,15	+	1	+	+	0
12,13	+	3	1	0	0
10,11	1	5	2	+	0
8,9	1	7	4	+	0
6,7	2	14	8	+	0
4,5	2	10	6	+	0
2,3	1	8	8	2	+
0,1	+	4	3	1	+
-2,-1	+	1	+	+	0
≤-3	0	+	0	0	0

Holman

3203 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	1	1	+	0
14,15	1	1	1	+	0
12,13	1	2	1	+	0
10,11	2	3	2	1	0
8,9	2	4	2	+	0
6,7	5	9	5	1	+
4,5	4	9	5	1	+
2,3	4	8	6	1	+
0,1	2	5	3	1	0
-2,-1	1	1	1	+	0
≤-3	+	+	+	+	0



Sachs Harbour

11144 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	1	+	0
10,11	1	2	2	+	0
8,9	1	3	3	+	0
6,7	1	6	7	1	0
4,5	1	5	7	1	+
2,3	1	8	9	1	+
0,1	2	8	12	1	+
-2,-1	1	4	6	1	+
-4,-3	+	1	2	1	0
-6,-5	+	+	+	+	0
≤-7	0	+	0	0	0

Mould Bay

9692 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	+	0	0
8,9	+	1	+	+	0
6,7	1	2	1	+	0
4,5	2	4	2	+	0
2,3	4	11	6	1	+
0,1	5	17	12	1	+
-2,-1	2	7	6	1	+
-4,-3	1	4	4	1	0
-6,-5	+	1	1	+	0
-8,-7	+	+	+	+	0
≤-9	+	+	+	0	0

Marine Area A

677 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	+	+	0	0
10,11	+	1	+	0	0
8,9	+	2	3	0	0
6,7	1	3	3	1	0
4,5	2	5	4	+	0
2,3	2	10	8	1	+
0,1	5	15	9	2	+
-2,-1	1	5	6	1	+
-4,-3	1	4	1	+	0
-6,-5	+	1	+	+	0
≤-7	0	+	0	0	0

Marine Area B

4808 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	+	+	0
10,11	+	1	1	+	0
8,9	1	1	1	+	+
6,7	1	4	3	1	+
4,5	2	6	5	1	+
2,3	2	9	9	1	+
0,1	4	14	12	2	+
-2,-1	1	4	5	1	+
-4,-3	+	1	1	+	+
-6,-5	+	+	+	+	0
≤-7	0	+	0	0	0

Marine Area C

7548 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	1	1	+	0
14,15	+	1	1	+	+
12,13	+	1	2	+	+
10,11	+	3	4	1	+
8,9	1	5	6	2	+
6,7	1	6	10	3	+
4,5	1	7	8	2	+
2,3	1	7	6	2	+
0,1	1	4	4	1	+
-2,-1	+	1	2	1	+
≤-3	+	+	+	+	+

Marine Area D

2477 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	0	0
14,15	+	1	1	0	0
12,13	1	2	2	+	0
10,11	1	4	5	1	+
8,9	2	6	8	2	+
6,7	2	8	13	4	+
4,5	1	7	9	3	+
2,3	1	4	4		+
0,1	1	2	2	1	+
-2,-1	+	+	+	+	+
≤-3	+	+	+	+	0

Ostrov Vrangelja

4070 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	0	0	0
6,7	+	+	+	+	0
4,5	1	1	1	+	0
2,3	2	5	4	1	+
0,1	4	7	6	1	+
-2,-1	6	12	10	1	+
-4,-3	4	8	6	2	+
-6,-5	1	3	3	1	+
-8,-7	1	1	1	+	+
-10,-9	+	1	+	+	+
≤-11	+	+	+	+	+

Mys Shmidta

4315 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	1	+	0	0
6,7	+	1	1	+	0
4,5	1	3	1	0	0
2,3	3	8	6	+	+
0,1	2	10	6	1	+
-2,-1	4	13	11	2	+
-4,-3	2	6	5	2	+
-6,-5	1	2	2	1	+
-8,-7	1	1	1	+	+
-10,-9	+	+	+	+	+
≤-11	1	+	+	+	+

Ostrov Kolychino

2431 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	+	+	0
8,9	+	+	1	+	0
6,7	+	2	2	+	0
4,5	1	3	5	1	+
2,3	2	9	12	3	+
0,1	2	10	9	1	+
-2,-1	2	9	10	2	+
-4,-3	1	4	3	1	+
-6,-5	+	1	1	+	0
-8,-7	+	+	+	0	0
≤-9	+	0	0	0	0

Mys Uelen

4350 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	+	+	+
10,11	+	+	+	+	0
8,9	+	+	1	+	+
6,7	+	2	2	1	+
4,5	2	6	9	3	+
2,3	4	13	18	7	+
0,1	2	5	7	3	+
-2,-1	1	3	4	1	+
-4,-3	+	1	1	+	0
-6,-5	+	+	+	+	0
≤-7	+	+	+	+	0

Tin City

19412 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	+	0
12,13	+	+	+	+	0
10,11	1	1	1	+	+
8,9	1	3	3	1	+
6,7	2	6	9	2	+
4,5	2	7	11	2	+
2,3	2	8	12	3	+
0,1	1	5	8	2	+
-2,-1	+	2	3	1	+
-4,-3	+	+	1	1	+
≤-5	+	+	+	+	0

Kotzebue

21063 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	1	+	0
12,13	+	1	1	+	0
10,11	+	4	3	+	0
8,9	1	5	5	+	0
6,7	1	11	11	1	+
4,5	1	8	7	1	+
2,3	1	8	7	1	+
0,1	1	5	5	1	+
-2,-1	+	2	2	+	+
-4,-3	+	1	1	+	0
≤-5	+	1	+	+	0

Cape Lisburne

19462 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	+	+	+	0
10,11	+	1	1	+	+
8,9	1	2	1	+	0
6,7	3	5	3	1	+
4,5	3	6	5	1	+
2,3	4	10	9	1	+
0,1	3	9	11	2	+
-2,-1	1	3	4	1	+
-4,-3	+	1	2	+	+
-6,-5	+	+	1	+	+
≤-7	0	+	+	+	0

Point Lay

3220 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	1	2	1	+	0
8,9	1	2	+	0	0
6,7	1	4	1	+	0
4,5	2	5	2	+	0
2,3	3	10	5	1	0
0,1	3	12	8	+	0
-2,-1	2	9	5	1	+
-4,-3	1	4	3	1	0
-6,-5	+	2	1	+	0
-8,-7	+	1	1	+	0
≤-9	+	1	1	+	0

Barrow

18708 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	1	+	0	0
6,7	+	1	1	+	0
4,5	+	2	1	+	0
2,3	+	5	5	+	+
0,1	1	13	11	1	+
-2,-1	1	11	12	1	+
-4,-3	1	8	8	1	+
-6,-5	+	3	4	+	0
-8,-7	+	3	2	+	0
-10,-9	+	1	1	0	0
≤-11	+	1	1	+	0

Lonely

3254 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	1	+	0	0
6,7	+	1	+	+	0
4,5	1	2	1	+	0
2,3	2	7	3	+	0
0,1	4	15	8	1	+
-2,-1	3	13	9	1	+
-4,-3	2	8	5	1	+
-6,-5	1	3	3	+	+
-8,-7	+	1	1	+	+
-10,-9	+	1	+	+	0
≤-11	+	+	+	+	0

Oliktok

3240 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	1	+	0	0
6,7	+	2	+	0	0
4,5	1	3	1	+	0
2,3	2	7	3	+	0
0,1	4	14	10	2	+
-2,-1	3	9	9	2	+
-4,-3	2	6	5	1	+
-6,-5	1	2	2	+	0
-8,-7	+	1	1	+	0
-10,-9	+	+	1	+	0
≤-11	+	+	+	0	0

Barter

17740 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	+	0	0
8,9	+	+	+	0	0
6,7	+	2	1	+	0
4,5	+	3	1	+	+
2,3	1	7	5	1	+
0,1	2	14	14	2	+
-2,-1	2	11	9	2	+
-4,-3	1	7	4	1	+
-6,-5	+	2	1	+	+
-8,-7	+	1	1	+	0
≤-9	+	1	+	+	+

Tuktoyaktuk

3104 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	1	+	0
10,11	+	2	1	0	+
8,9	1	3	1	+	0
6,7	1	6	3	+	0
4,5	1	7	4	+	0
2,3	2	12	8	1	+
0,1	1	13	10	1	0
-2,-1	1	5	4	+	0
-4,-3	+	3	2	+	+
-6,-5	+	1	1	+	0
≤-7	+	1	1	0	0

Cape Parry

18968 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	+	0	0
8,9	+	+	+	+	0
6,7	1	2	2	+	0
4,5	1	3	4	+	+
2,3	2	8	9	1	+
0,1	3	13	15	2	+
-2,-1	2	6	7	1	+
-4,-3	1	4	4	1	+
-6,-5	+	1	2	+	0
-8,-7	+	+	1	+	0
≤-9	+	+	+	+	0

Clinton Point

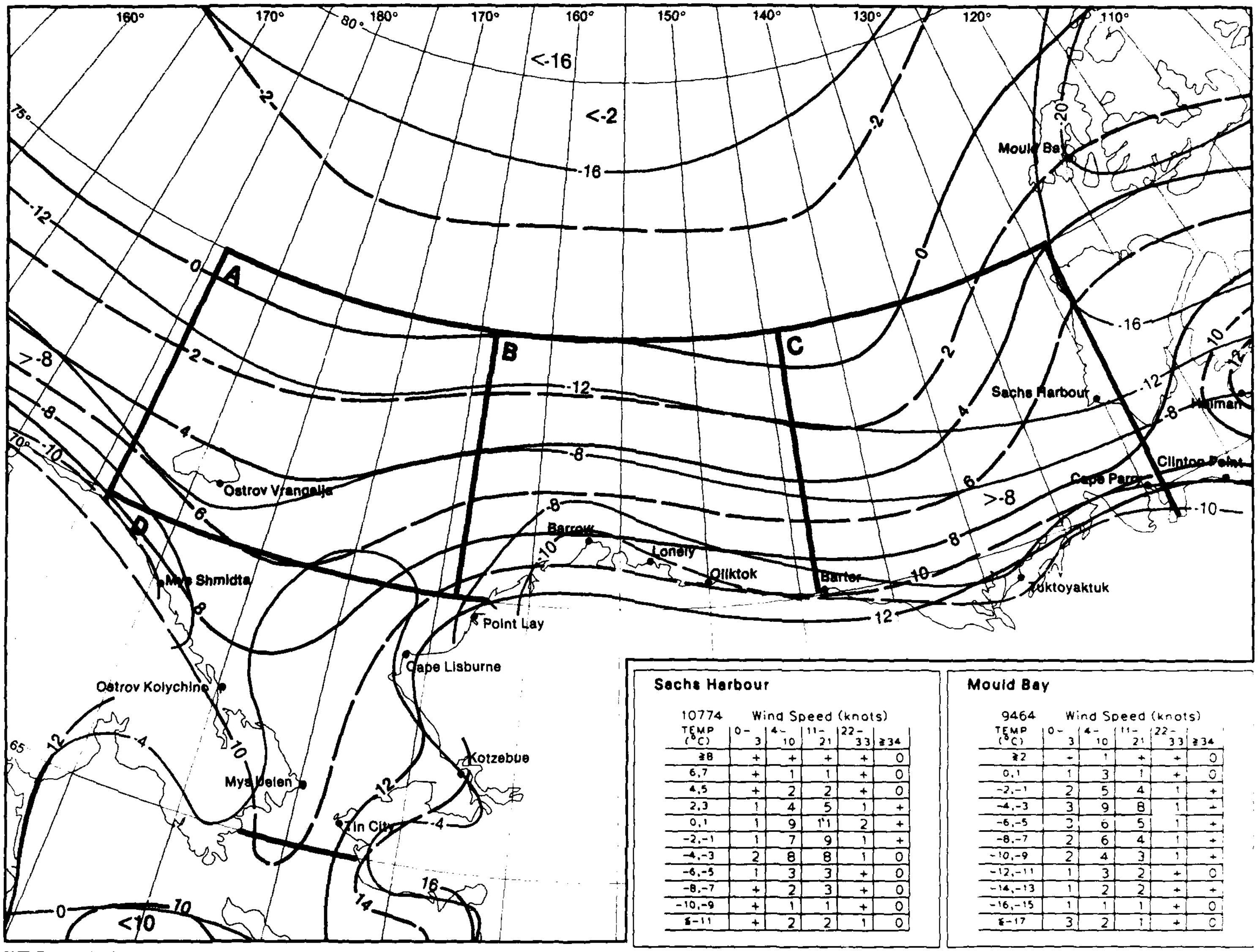
4356 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	1	1	+	0
8,9	+	1	+	+	0
6,7	+	4	2	+	0
4,5	1	7	4	+	+
2,3	2	13	9	1	+
0,1	2	14	10	1	+
-2,-1	1	5	5	1	+
-4,-3	1	3	3	1	+
-6,-5	+	1	1	1	+
-8,-7	+	+	+	0	0
≤-9	+	+	+	0	0

Holman

3114 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	1	1	1	+	0
8,9	+	1	1	+	+
6,7	2	2	1	+	+
4,5	2	4	2	+	0
2,3	5	8	4	1	+
0,1	5	12	8	1	+
-2,-1	3	8	7	1	0
-4,-3	2	4	4	1	+
-6,-5	+	1	2	1	0
-8,-7	+	1	1	1	0
≤-9	0	+	+	+	+



Sachs Harbour

10774 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	+	0
6,7	+	1	1	+	0
4,5	+	2	2	+	0
2,3	1	4	5	1	+
0,1	1	9	11	2	+
-2,-1	1	7	9	1	+
-4,-3	2	8	8	1	0
-6,-5	1	3	3	+	0
-8,-7	+	2	3	+	0
-10,-9	+	1	1	+	0
≤-11	+	2	2	1	0

Mould Bay

9464 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	+	+	0
0,1	1	3	1	+	0
-2,-1	2	5	4	1	+
-4,-3	3	9	8	1	+
-6,-5	3	6	5	1	+
-8,-7	2	6	4	1	+
-10,-9	2	4	3	1	+
-12,-11	1	3	2	+	0
-14,-13	1	2	2	+	+
-16,-15	1	1	1	+	0
≤-17	3	2	1	+	0

Marine Area A

838 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	+	+	+	0
6,7	+	1	1	0	0
4,5	1	2	2	1	+
2,3	1	5	8	2	+
0,1	1	8	12	5	+
-2,-1	2	6	9	2	+
-4,-3	2	2	5	1	0
-6,-5	2	3	2	1	0
-8,-7	3	2	1	1	0
-10,-9	1	1	1	+	0
≤-11	1	1	1	+	0

Marine Area B

2463 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	1	+	0
6,7	+	1	1	+	+
4,5	1	1	2	1	0
2,3	1	3	5	1	+
0,1	3	10	13	4	+
-2,-1	2	10	10	2	+
-4,-3	1	6	6	1	+
-6,-5	+	2	3	+	+
-8,-7	1	1	2	+	0
-10,-9	+	+	1	0	0
≤-11	0	+	1	+	+

Marine Area C

6932 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	+	+	0
8,9	+	1	2	+	+
6,7	1	2	4	1	+
4,5	1	4	7	3	+
2,3	1	6	9	3	+
0,1	2	8	10	4	+
-2,-1	1	6	6	2	+
-4,-3	1	2	3	1	+
-6,-5	+	2	2	1	+
-8,-7	+	1	1	+	0
≤-9	+	1	1	+	+

Marine Area D

2213 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	+	0	0
10,11	+	1	+	+	+
8,9	+	2	2	1	0
6,7	1	4	8	2	+
4,5	2	6	11	4	1
2,3	1	6	8	5	1
0,1	3	5	6	3	1
-2,-1	1	3	2	1	+
-4,-3	+	1	2	1	0
-6,-5	+	+	1	+	0
≤-7	+	0	+	0	0

Ostrov Vrangelja

4248 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	2	2	+	0
-2,-1	1	3	3	+	+
-4,-3	1	5	5	1	+
-6,-5	1	4	5	1	+
-8,-7	2	5	7	2	1
-10,-9	1	3	4	1	1
-12,-11	2	4	3	1	+
-14,-13	2	3	4	1	+
-16,-15	1	2	3	1	+
-18,-17	1	2	2	1	+
≤-19	2	1	1	1	+

Mys Shmidta

4565 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	1	1	+	0
-2,-1	1	4	3	+	+
-4,-3	1	4	5	2	+
-6,-5	1	3	6	2	1
-8,-7	2	5	6	2	1
-10,-9	1	3	3	1	+
-12,-11	2	3	3	1	1
-14,-13	2	3	3	2	+
-16,-15	1	2	2	1	+
-18,-17	1	2	2	+	+
≤-19	3	2	1	1	+

Ostrov Kolychino

2709 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	0	+	+	0
2,3	+	1	1	+	+
0,1	+	2	3	1	+
-2,-1	1	5	8	4	1
-4,-3	1	5	7	5	1
-6,-5	1	3	7	4	2
-8,-7	1	6	6	2	1
-10,-9	+	2	2	1	+
-12,-11	+	2	2	1	+
-14,-13	+	1	2	+	+
≤-15	2	3	2	1	+

Mys Uelen

4532 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	0	+	+	+	+
4,5	+	+	1	+	+
2,3	1	2	5	2	1
0,1	1	3	6	2	+
-2,-1	1	6	10	7	2
-4,-3	1	3	7	6	+
-6,-5	1	3	4	4	1
-8,-7	1	3	3	2	+
-10,-9	+	1	1	1	+
-12,-11	+	1	1	+	+
≤-13	1	2	1	+	0

Tin City

19607 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	+	+	+	+	+
4,5	+	1	1	1	+
2,3	1	2	4	1	+
0,1	1	5	7	3	+
-2,-1	2	5	8	2	+
-4,-3	2	6	9	4	+
-6,-5	1	4	5	2	+
-8,-7	1	3	4	2	+
-10,-9	+	2	3	1	+
-12,-11	+	1	1	+	+
≤-13	+	1	1	+	+

Kotzebue

21788 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	1	2	+	0
2,3	+	2	4	1	0
0,1	1	6	8	1	+
-2,-1	1	5	5	1	0
-4,-3	1	7	6	2	+
-6,-5	1	5	4	1	+
-8,-7	1	6	4	1	+
-10,-9	+	5	3	1	+
-12,-11	+	3	2	+	+
-14,-13	+	3	1	+	0
≤-15	+	5	1	+	0

Cape Lisburne

20259 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	+	1	1	+
2,3	1	1	2	1	+
0,1	2	3	3	1	+
-2,-1	2	4	5	2	+
-4,-3	3	6	8	3	+
-6,-5	2	5	5	2	+
-8,-7	1	4	5	1	+
-10,-9	1	4	3	1	+
-12,-11	+	2	2	1	+
-14,-13	+	2	3	+	+
≤-15	+	2	3	+	+

Point Lay

2966 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	4	3	+	0
-2,-1	+	4	3	+	+
-4,-3	2	5	3	+	+
-6,-5	2	4	3	+	0
-8,-7	3	6	3	+	[illegible]
-10,-9	1	4	3	+	+
-12,-11	1	4	2	+	+
-14,-13	+	4	3	+	0
-16,-15	1	3	2	+	0
-18,-17	1	3	2	+	0
≤-19	1	6	4	+	0

Barrow

19089 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	1	3	+	+
-2,-1	+	2	4	1	+
-4,-3	1	4	6	1	+
-6,-5	1	4	4	1	0
-8,-7	1	7	6	1	+
-10,-9	+	6	5	1	+
-12,-11	+	3	3	+	0
-14,-13	+	4	4	+	0
-16,-15	+	3	3	+	0
-18,-17	+	3	3	+	0
≤-19	1	7	3	+	0

Lonely

3340 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	2	1	+	0
-2,-1	+	3	2	1	+
-4,-3	1	5	4	2	+
-6,-5	1	5	4	2	+
-8,-7	2	6	4	1	0
-10,-9	2	5	4	1	0
-12,-11	1	4	2	+	+
-14,-13	1	4	2	1	0
-16,-15	1	3	2	+	0
-18,-17	1	4	2	+	+
≤-19	3	8	2	+	0

Oliktok

3320 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	2	1	+	+
-2,-1	+	2	3	1	+
4,-3	2	4	4	2	1
-6,-5	1	5	5	1	+
-8,-7	2	6	4	1	+
-10,-9	2	5	3	1	0
-12,-11	1	4	2	+	+
-14,-13	1	4	2	1	+
-16,-15	1	2	1	+	0
-18,-17	1	4	2	+	0
≤-19	3	8	2	+	0

Barter

18073 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	2	+	+	+
-2,-1	+	3	3	+	+
-4,-3	1	5	5	2	+
-6,-5	1	4	5	3	+
-8,-7	1	6	6	3	+
-10,-9	1	6	4	2	+
-12,-11	1	4	2	1	+
-14,-13	1	4	3	1	+
-16,-15	+	2	2	+	+
-18,-17	+	3	1	+	+
≤-19	1	5	2	+	+

Tuktoyaktuk

3217 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	+	0	0
0,1	+	3	3	+	0
-2,-1	+	5	4	+	+
-4,-3	1	8	7	1	0
-6,-5	1	6	4	+	0
-8,-7	2	7	5	+	0
-10,-9	1	5	4	+	0
-12,-11	1	3	2	+	+
-14,-13	1	3	3	+	0
-16,-15	1	3	2	+	0
≤-17	2	6	2	+	0

Cape Parry

19740 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	+	+	+	0
0,1	1	2	3	+	0
-2,-1	1	4	6	1	0
-4,-3	2	6	10	2	+
-6,-5	1	5	6	2	+
-8,-7	1	5	7	1	+
-10,-9	1	4	5	1	+
-12,-11	1	2	2	+	+
-14,-13	1	2	2	1	0
-16,-15	1	1	1	+	+
≤-17	2	2	2	+	+

Clinton Point

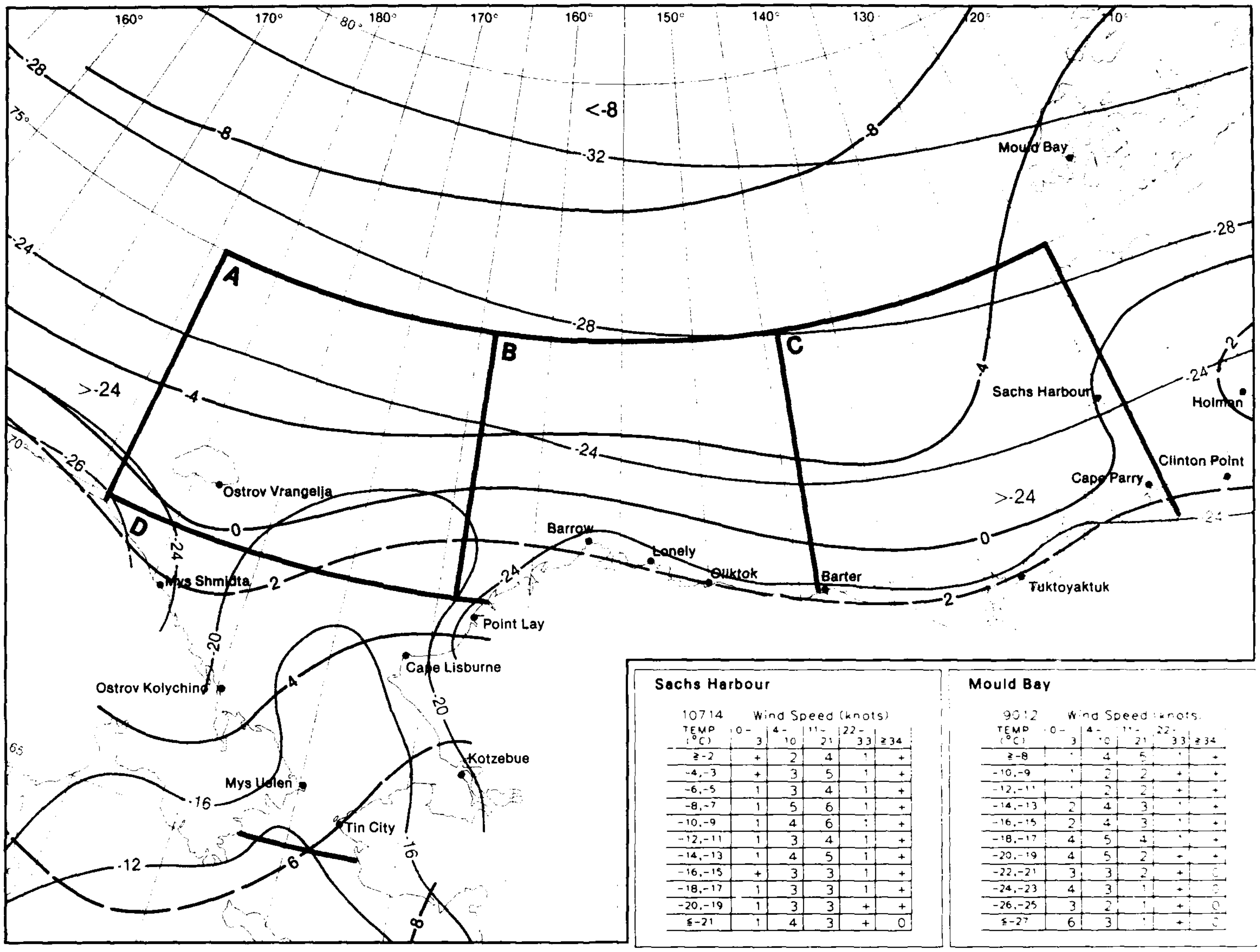
4475 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	+	+	0	0
0,1	+	2	2	+	0
-2,-1	1	5	3	1	+
-4,-3	1	7	6	2	+
-6,-5	1	5	6	2	+
-8,-7	1	6	7	3	+
-10,-9	1	6	4	1	+
-12,-11	+	3	2	+	+
-14,-13	+	3	2	+	+
-16,-15	+	3	1	+	0
≤-17	1	4	2	+	0

Holman

3219 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	+	+	+	0
0,1	1	2	+	+	+
-2,-1	2	3	3	1	+
-4,-3	3	6	5	+	+
-6,-5	2	6	4	2	+
-8,-7	2	8	6	2	+
-10,-9	1	6	5	1	+
-12,-11	1	3	2	1	+
-14,-13	1	2	2	1	+
-16,-15	+	1	2	+	+
≤-17	1	2	2	1	+



Sachs Harbour

10714 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥-2	+	2	4	1	+
-4,-3	+	3	5	1	+
-6,-5	1	3	4	1	+
-8,-7	1	5	6	1	+
-10,-9	1	4	6	1	+
-12,-11	1	3	4	1	+
-14,-13	1	4	5	1	+
-16,-15	+	3	3	1	+
-18,-17	1	3	3	1	+
-20,-19	1	3	3	+	+
≤-21	1	4	3	+	0

Mould Bay

9012 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥-8	1	4	5	1	+
-10,-9	1	2	2	+	+
-12,-11	1	2	2	+	+
-14,-13	2	4	3	1	+
-16,-15	2	4	3	1	+
-18,-17	4	5	4	1	+
-20,-19	4	5	2	+	+
-22,-21	3	3	2	+	0
-24,-23	4	3	1	+	0
-26,-25	3	2	1	+	0
≤-27	6	3	1	+	0

Marine Area A

280 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥-2	1	1	7	3	0
-4,-3	1	3	2	1	+
-6,-5	0	2	1	1	0
-8,-7	1	1	2	1	+
-10,-9	1	2	6	3	+
-12,-11	1	4	2	2	+
-14,-13	2	9	2	2	0
-16,-15	0	7	3	2	0
-18,-17	+	4	3	0	0
-20,-19	0	1	1	0	0
≤-21	1	6	4	1	0

Marine Area B

1008 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥-4	1	5	8	3	+
-6,-5	1	3	2	1	1
-8,-7	1	2	2	+	+
-10,-9	1	3	3	1	+
-12,-11	1	2	2	1	+
-14,-13	1	3	3	+	+
-16,-15	+	5	3	1	+
-18,-17	1	3	4	+	0
-20,-19	1	4	3	+	0
-22,-21	+	3	1	+	0
≤-23	2	10	3	0	0

Marine Area C

3623 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥2	+	+	+	+	0
0,1	+	1	2	+	+
-2,-1	1	5	9	3	+
-4,-3	1	5	8	3	+
-6,-5	1	3	8	4	+
-8,-7	+	3	8	2	1
-10,-9	+	2	3	1	1
-12,-11	+	1	3	+	+
-14,-13	+	1	2	+	+
-16,-15	+	1	1	+	0
≤-17	1	5	3	+	+

Marine Area D

865 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥6	0	+	+	+	0
4,5	0	+	2	1	0
2,3	+	3	5	2	1
0,1	1	2	5	6	2
-2,-1	1	3	6	4	1
-4,-3	1	3	6	6	2
-6,-5	+	2	4	3	1
-8,-7	+	3	2	2	1
-10,-9	+	1	1	1	+
-12,-11	+	1	2	2	1
≤-13	+	1	2	+	+

7 Air Temperature Extremes

October

Ostrov Vrangelja

4118 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	1	2	4	2	+
-8,-7	1	2	5	1	+
-10,-9	+	1	2	1	+
-12,-11	1	2	3	1	1
-14,-13	1	3	4	2	+
-16,-15	1	3	4	2	1
-18,-17	2	3	5	3	1
-20,-19	1	3	3	2	1
-22,-21	1	3	4	2	1
-24,-23	1	3	2	1	+
≤-25	2	3	1	+	+

Mys Shmidta

4342 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	4	8	3	1
-10,-9	+	1	2	+	+
-12,-11	1	2	2	1	+
-14,-13	1	2	3	2	1
-16,-15	1	2	3	2	1
-18,-17	2	3	4	2	1
-20,-19	1	2	3	2	+
-22,-21	1	3	3	2	1
-24,-23	1	2	3	2	+
-26,-25	2	2	3	1	+
≤-27	4	4	3	1	+

Ostrov Kolychino

2577 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	+	2	5	2	1
-6,-5	+	1	4	2	1
-8,-7	+	2	6	2	1
-10,-9	+	1	3	1	+
-12,-11	1	2	4	1	+
-14,-13	+	2	4	2	1
-16,-15	1	3	4	1	+
-18,-17	1	4	4	1	+
-20,-19	+	2	2	1	+
-22,-21	1	3	2	1	0
≤-23	3	7	4	1	0

Mys Uelen

4328 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	+	[illegible]	2	2
-2,-1	+	[illegible]	3	2	[illegible]
-4,-3	1	2	4	3	[illegible]
-6,-5	1	3	4	4	[illegible]
-8,-7	1	3	5	4	[illegible]
-10,-9	+	2	3	2	+
-12,-11	1	2	3	2	+
-14,-13	1	3	3	2	+
-16,-15	+	3	3	[illegible]	+
-18,-17	1	2	3	[illegible]	+
≤-19	3	4	4	[illegible]	+

Tin City

19014 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	1	2	2	+
-2,-1	1	2	2	1	+
-4,-3	1	2	4	2	+
-6,-5	1	2	4	2	+
-8,-7	1	2	6	3	+
-10,-9	1	3	6	3	1
-12,-11	1	2	4	2	+
-14,-13	+	2	6	3	+
-16,-15	+	1	4	2	+
-18,-17	+	1	3	1	+
≤-19	+	1	4	2	+

Kotzebue

21084 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	1	2	5	3	+
-6,-5	1	2	3	1	+
-8,-7	1	3	5	2	+
-10,-9	1	4	4	2	+
-12,-11	1	4	3	1	+
-14,-13	1	5	4	2	+
-16,-15	1	4	3	1	+
-18,-17	1	5	2	1	+
-20,-19	1	4	2	1	+
-22,-21	+	2	1	+	+
≤-23	3	8	2	+	+

Cape Lisburne

19420 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	2	3	5	4	1
-6,-5	1	2	2	1	+
-8,-7	1	3	3	1	+
-10,-9	1	4	3	1	+
-12,-11	1	3	3	1	+
-14,-13	1	5	4	1	+
-16,-15	1	5	4	1	+
-18,-17	1	5	4	1	+
-20,-19	1	4	5	1	+
-22,-21	1	2	2	1	0
≤-23	1	3	2	+	+

Point Lay

3103 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	6	5	2	+
-10,-9	1	2	2	+	[illegible]
-12,-11	1	3	[illegible]	[illegible]	+
-14,-13	1	4	2	[illegible]	+
-16,-15	1	3	3	[illegible]	[illegible]
-18,-17	1	4	4	[illegible]	+
-20,-19	1	3	3	2	+
-22,-21	1	3	3	2	+
-24,-23	1	3	3	2	+
-26,-25	1	2	2	[illegible]	+
≤-27	2	7	6	[illegible]	+

Barrow

18466 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	5	8	2	+
-12,-11	+	1	2	1	0
-14,-13	+	3	4	1	+
-16,-15	+	3	4	1	+
-18,-17	1	5	5	1	+
-20,-19	+	5	4	1	0
-22,-21	+	5	4	1	0
-24,-23	+	6	5	+	0
-26,-25	+	4	2	+	0
-28,-27	1	4	1	0	0
≤-29	1	5	1	0	0

Lonely

3268 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	5	5	2	+
-12,-11	+	2	1	+	+
-14,-13	1	4	3	1	+
-16,-15	1	3	2	1	+
-18,-17	2	3	4	1	+
-20,-19	1	4	4	1	+
-22,-21	1	4	3	1	+
-24,-23	1	5	4	1	+
-26,-25	2	4	3	+	0
-28,-27	1	4	1	+	0
≤-29	3	6	1	+	0

Oliktok

3199 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	4	5	2	+
-12,-11	1	2	2	1	+
-14,-13	1	3	4	1	+
-16,-15	1	3	3	1	+
-18,-17	1	3	4	1	+
-20,-19	1	3	3	1	+
-22,-21	1	4	3	1	+
-24,-23	2	4	3	2	0
-26,-25	1	4	2	+	0
-28,-27	1	4	2	+	0
≤-29	3	7	2	+	0

Barter

17447 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	[illegible]	3	4	3	[illegible]
-10,-9	+	2	3	2	+
-12,-11	+	2	2	[illegible]	+
-14,-13	1	3	4	2	[illegible]
-16,-15	[illegible]	3	3	[illegible]	+
-18,-17	1	4	3	2	+
-20,-19	1	4	4	2	+
-22,-21	1	3	2	[illegible]	+
-24,-23	1	5	4	[illegible]	+
-26,-25	1	3	2	+	+
≤-27	2	10	3	[illegible]	+

Tuktoyaktuk

3117 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	5	5	1	+
-12,-11	+	2	2	+	0
-14,-13	1	4	3	+	0
-16,-15	1	5	2	1	0
-18,-17	1	5	4	1	+
-20,-19	1	5	3	+	0
-22,-21	1	4	3	+	0
-24,-23	2	6	2	+	0
-26,-25	2	4	2	0	0
-28,-27	2	4	1	0	0
≤-29	4	8	1	0	0

Cape Parry

19173 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	2	3	1	+
-10,-9	1	2	3	1	+
-12,-11	1	2	2	1	+
-14,-13	1	4	5	1	+
-16,-15	1	3	4	1	+
-18,-17	1	4	4	1	+
-20,-19	2	4	4	1	0
-22,-21	2	3	3	1	+
-24,-23	2	4	3	+	+
-26,-25	2	3	2	+	0
≤-27	4	5	3	+	0

Clinton Point

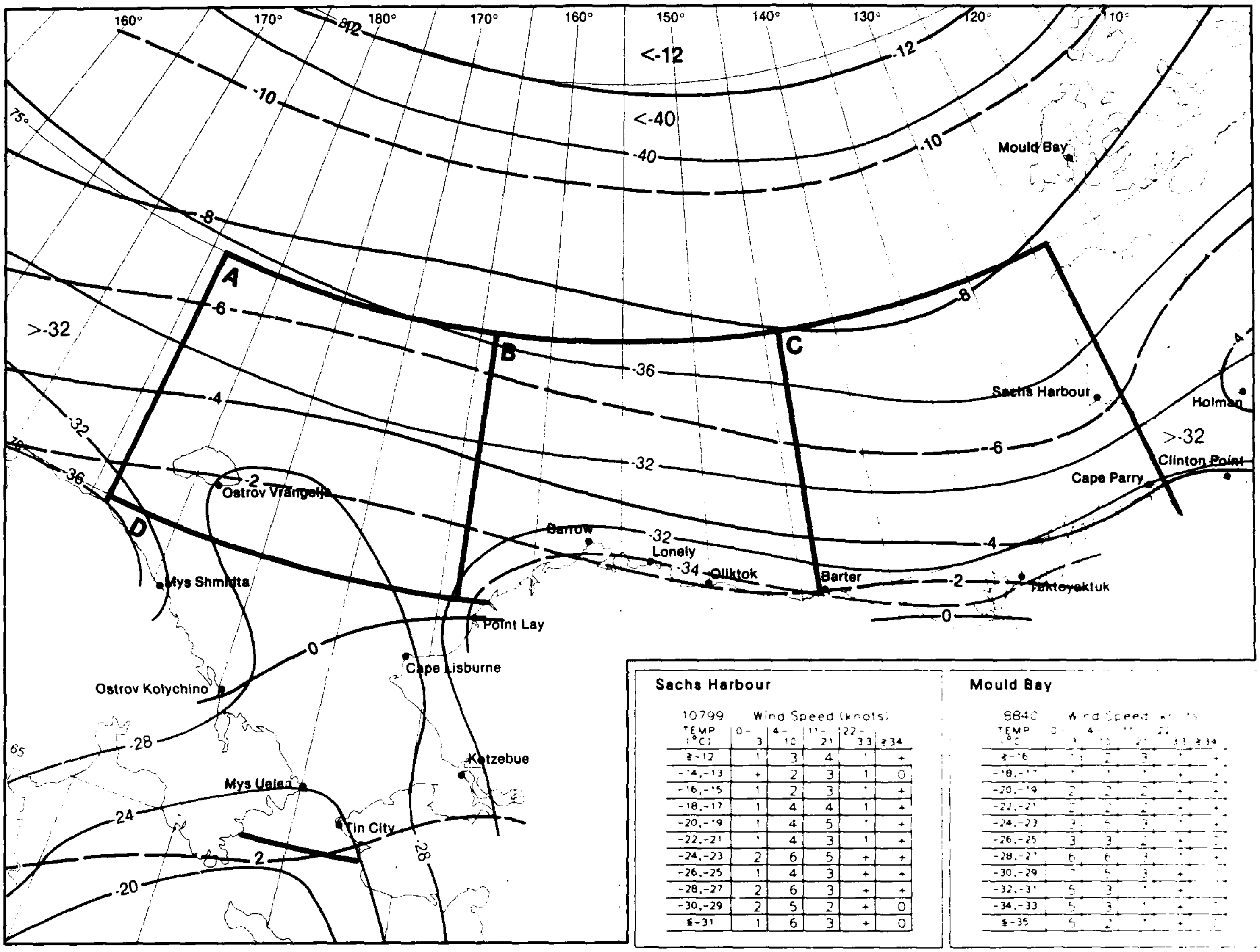
4337 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	3	4	1	+
-10,-9	1	4	4	1	+
-12,-11	1	3	4	1	+
-14,-13	1	4	5	1	+
-16,-15	1	3	4	1	0
-18,-17	1	4	4	1	+
-20,-19	1	4	3	1	+
-22,-21	1	3	2	+	+
-24,-23	1	4	3	1	+
-26,-25	+	3	2	1	+
≤-27	3	11	2	+	0

Holman

3108 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	2	3	2	[illegible]	+
-10,-9	1	3	2	[illegible]	+
-12,-11	[illegible]	3	2	[illegible]	+
-14,-13	2	5	3	1	+
-16,-15	1	4	3	[illegible]	+
-18,-17	2	4	3	2	+
-20,-19	3	4	3	2	+
-22,-21	2	3	2	1	+
-24,-23	2	5	3	[illegible]	+
-26,-25	1	3	2	1	+
≤-27	2	4	2	+	+



Sachs Harbour

10799 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	1	3	4	1	+
-14,-13	+	2	3	1	0
-16,-15	1	2	3	1	+
-18,-17	1	4	4	1	+
-20,-19	1	4	5	1	+
-22,-21	1	4	3	1	+
-24,-23	2	6	5	+	+
-26,-25	1	4	3	+	+
-28,-27	2	6	3	+	+
-30,-29	2	5	2	+	0
≤-31	1	6	3	+	0

Mould Bay

8840 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	2	3	[illegible]	+
-18,-17	[illegible]	[illegible]	[illegible]	+	+
-20,-19	2	2	2	+	+
-22,-21	2	2	2	+	+
-24,-23	3	6	3	[illegible]	+
-26,-25	3	3	2	+	[illegible]
-28,-27	6	6	3	[illegible]	+
-30,-29	7	6	3	+	[illegible]
-32,-31	5	3	[illegible]	+	[illegible]
-34,-33	5	3	[illegible]	+	[illegible]
≤-35	5	2	[illegible]	+	[illegible]

Marine Area A

114 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	1	1	6	11	0
-16,-15	0	0	1	3	0
-18,-17	0	3	1	2	0
-20,-19	0	4	1	0	0
-22,-21	2	1	0	0	0
-24,-23	9	6	0	0	0
-26,-25	7	4	2	0	0
-28,-27	7	5	0	0	0
-30,-29	4	4	0	0	0
-32,-31	2	3	0	0	0
≤-33	11	2	0	0	0

Marine Area B

838 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	1	3	2	1	0
-14,-13	3	2	1	+	0
-16,-15	6	2	2	+	+
-18,-17	3	1	1	1	+
-20,-19	3	2	1	+	+
-22,-21	4	2	2	2	+
-24,-23	4	4	3	1	+
-26,-25	3	4	3	2	0
-28,-27	5	3	5	1	0
-30,-29	1	3	4	0	0
≤-31	+	6	3	+	0

Marine Area C

1726 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	5	5	1	0
-10,-9	1	3	2	2	+
-12,-11	1	3	3	2	+
-14,-13	1	3	3	2	+
-16,-15	1	3	4	1	0
-18,-17	1	3	3	1	+
-20,-19	1	2	2	1	+
-22,-21	2	5	2	1	0
-24,-23	2	5	3	+	0
-26,-25	3	5	2	+	+
≤-27	3	5	1	+	0

Marine Area D

89 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	0	0	2	[illegible]	[illegible]
0,1	0	[illegible]	[illegible]	1	4
-2,-1	0	2	[illegible]	6	3
-4,-3	0	0	3	3	[illegible]
-6,-5	0	1	2	4	[illegible]
-8,-7	[illegible]	0	[illegible]	3	[illegible]
-10,-9	0	2	3	[illegible]	[illegible]
-12,-11	0	0	9	4	[illegible]
-14,-13	0	1	8	[illegible]	[illegible]
-16,-15	0	0	11	3	[illegible]
≤-17	0	0	4	2	[illegible]

Ostrov Vrangelja

4183 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	1	3	2	1	0
-14,-13	1	1	1	+	+
-16,-15	1	2	2	1	+
-18,-17	2	3	4	1	+
-20,-19	2	2	2	1	+
-22,-21	3	3	4	2	1
-24,-23	3	5	4	2	1
-26,-25	4	5	3	2	1
-28,-27	5	5	3	1	+
-30,-29	2	2	1	+	+
≤-31	4	1	1	+	0

Mys Shmidta

4427 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	1	3	2	1	+
-16,-15	1	2	1	+	+
-18,-17	2	3	3	1	+
-20,-19	1	2	2	1	+
-22,-21	2	2	3	1	+
-24,-23	2	3	4	1	+
-26,-25	2	3	4	2	1
-28,-27	3	5	5	1	+
-30,-29	1	3	3	1	+
-32,-31	2	2	3	1	+
≤-33	6	3	2	1	+

Ostrov Kolychino

2548 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-12	1	3	7	2	+
-14,-13	+	1	2	+	+
-16,-15	+	2	2	+	+
-18,-17	1	4	5	1	+
-20,-19	1	2	2	+	+
-22,-21	1	3	4	1	+
-24,-23	1	5	5	1	+
-26,-25	1	4	4	1	0
-28,-27	2	6	4	1	+
-30,-29	2	4	2	+	0
≤-31	3	7	2	+	0

Mys Uelen

4443 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	4	6	4	[illegible]
-12,-11	1	2	2	1	+
-14,-13	1	2	2	1	+
-16,-15	1	2	2	1	+
-18,-17	2	3	5	1	+
-20,-19	1	2	3	1	+
-22,-21	2	3	4	1	+
-24,-23	2	3	4	1	+
-26,-25	2	4	3	1	[illegible]
-28,-27	3	3	2	+	[illegible]
≤-29	3	3	2	+	[illegible]

Tin City

19131 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	2	5	7	3	1
-10,-9	1	1	2	1	+
-12,-11	1	1	2	1	+
-14,-13	1	1	4	2	+
-16,-15	1	1	3	2	+
-18,-17	1	1	5	3	+
-20,-19	1	1	5	3	+
-22,-21	+	1	4	3	+
-24,-23	1	1	5	4	+
-26,-25	+	1	3	2	+
≤-27	+	1	5	3	+

Kotzebue

21787 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	1	4	9	6	1
-12,-11	+	1	2	1	+
-14,-13	1	3	2	1	+
-16,-15	1	3	2	1	+
-18,-17	1	3	2	1	+
-20,-19	1	4	2	1	+
-22,-21	1	4	2	1	+
-24,-23	1	4	2	1	+
-26,-25	1	3	1	+	+
-28,-27	2	4	1	+	+
≤-29	6	11	2	+	+

Cape Lisburne

19244 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-10	2	4	4	4	1
-12,-11	1	1	1	+	+
-14,-13	1	3	1	+	+
-16,-15	1	3	2	+	+
-18,-17	1	4	3	1	+
-20,-19	2	5	5	1	+
-22,-21	2	4	4	1	+
-24,-23	2	5	4	1	+
-26,-25	2	3	2	+	+
-28,-27	2	3	2	+	+
≤-29	3	4	1	+	0

Point Lay

3338 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	2	[illegible]	[illegible]	[illegible]	[illegible]
-18,-17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-20,-19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-22,-21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-24,-23	1	4	4	[illegible]	[illegible]
-26,-25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-28,-27	1	4	[illegible]	[illegible]	[illegible]
-30,-29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-32,-31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-34,-33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
≤-35	4	[illegible]	[illegible]	[illegible]	[illegible]

Barrow

[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	+	4	6	1	+
-18,-17	+	3	4	1	+
-20,-19	+	4	4	1	+
-22,-21	1	4	4	1	+
-24,-23	1	6	5	1	+
-26,-25	1	5	3	+	0
-28,-27	1	7	3	+	0
-30,-29	1	7	2	+	0
-32,-31	1	5	1	0	0
-34,-33	1	5	1	0	0
≤-35	2	7	1	0	0

Lonely

4442 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	6	5	1	+
-18,-17	1	3	2	1	[illegible]
-20,-19	1	4	3	1	+
-22,-21	1	4	2	1	+
-24,-23	1	4	3	1	+
-26,-25	1	3	2	+	0
-28,-27	2	4	3	+	0
-30,-29	3	6	2	+	0
-32,-31	2	5	1	+	0
-34,-33	3	4	1	0	0
≤-35	5	9	1	+	0

Oliktok

[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	[illegible]	5	2	+
-18,-17	1	2	2	1	+
-20,-19	1	3	3	1	+
-22,-21	1	3	2	1	+
-24,-23	1	3	3	1	+
-26,-25	1	3	3	+	+
-28,-27	1	3	3	1	+
-30,-29	2	4	3	+	0
-32,-31	2	4	2	+	0
-34,-33	2	4	2	+	0
≤-35	5	11	3	+	0

Barter

[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-18,-17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-20,-19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-22,-21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-24,-23	1	4	4	[illegible]	[illegible]
-26,-25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-28,-27	1	4	4	[illegible]	[illegible]
-30,-29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-32,-31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-34,-33	1	4	[illegible]	[illegible]	[illegible]
≤-35	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Tuktoyaktuk

[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	4	5	1	+
-18,-17	1	3	2	+	+
-20,-19	1	4	3	1	0
-22,-21	1	3	3	+	0
-24,-23	1	5	4	1	0
-26,-25	1	4	3	+	0
-28,-27	1	5	4	+	+
-30,-29	2	7	2	+	0
-32,-31	2	4	1	+	0
-34,-33	2	4	1	+	0
≤-35	3	6	1	0	0

Cape Parry

19788 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	1	3	5	1	+
-18,-17	1	3	3	1	+
-20,-19	1	3	4	1	+
-22,-21	1	3	3	1	+
-24,-23	2	3	5	1	+
-26,-25	1	3	4	1	0
-28,-27	2	5	6	1	+
-30,-29	3	5	4	1	+
-32,-31	2	3	2	+	0
-34,-33	2	3	2	+	0
≤-35	3	2	1	+	0

Clinton Point

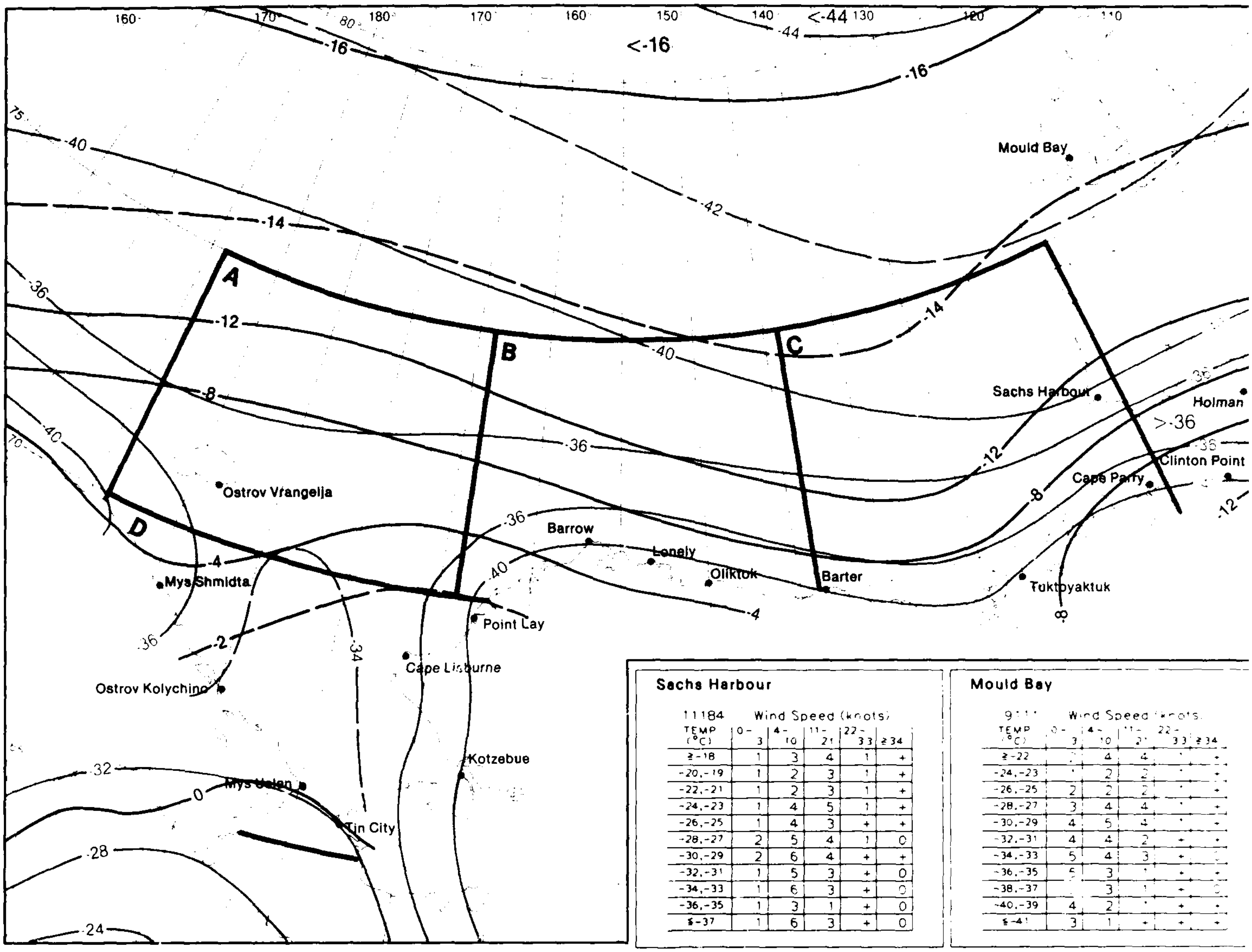
[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	2	5	4	2	+
-20,-19	1	2	3	1	+
-22,-21	1	3	3	1	+
-24,-23	1	4	4	1	+
-26,-25	1	3	4	2	+
-28,-27	1	5	4	2	+
-30,-29	1	6	3	1	+
-32,-31	1	5	2	+	0
-34,-33	2	8	+	+	0
-36,-35	1	4	+	0	0
≤-37	2	5	+	0	0

Holman

[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-16,-15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-18,-17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-20,-19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-22,-21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-24,-23	3	4	3	[illegible]	[illegible]
-26,-25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-28,-27	[illegible]	[illegible]	3	[illegible]	[illegible]
-30,-29	3	4	[illegible]	[illegible]	[illegible]
-32,-31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
≤-33	3	3	[illegible]	[illegible]	[illegible]



Sachs Harbour

11184 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-18	1	3	4	1	+
-20,-19	1	2	3	1	+
-22,-21	1	2	3	1	+
-24,-23	1	4	5	1	+
-26,-25	1	4	3	+	+
-28,-27	2	5	4	1	0
-30,-29	2	6	4	+	+
-32,-31	1	5	3	+	0
-34,-33	1	6	3	+	0
-36,-35	1	3	1	+	0
≤-37	1	6	3	+	0

Mould Bay

9[illegible] Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-22	[illegible]	4	4	[illegible]	+
-24,-23	[illegible]	2	2	[illegible]	+
-26,-25	2	2	2	[illegible]	+
-28,-27	3	4	4	[illegible]	+
-30,-29	4	5	4	[illegible]	+
-32,-31	4	4	2	+	+
-34,-33	5	4	3	+	0
-36,-35	5	3	[illegible]	+	+
-38,-37	[illegible]	3	1	+	0
-40,-39	4	2	[illegible]	+	+
≤-41	3	1	+	+	+

Marine Area A

243 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-16	2	1	+	0	0
-18,-17	0	3	+	+	0
-20,-19	1	3	2	0	0
-22,-21	4	4	3	0	0
-24,-23	3	4	2	+	0
-26,-25	5	8	4	0	0
-28,-27	8	6	3	+	0
-30,-29	2	4	+	0	0
-32,-31	2	7	2	0	+
-34,-33	3	5	0	0	0
≤-35	1	5	0	0	0

Marine Area B

582 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	12	7	1	0	0
-16,-15	1	2	+	+	0
-18,-17	2	1	+	0	0
-20,-19	2	2	1	1	+
-22,-21	1	3	1	1	0
-24,-23	4	4	1	+	0
-26,-25	9	4	2	+	0
-28,-27	11	3	1	0	0
-30,-29	7	1	+	0	0
-32,-31	2	1	2	0	0
≤-33	4	7	1	0	+

Marine Area C

6[illegible]3 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-14	1	2	6	5	2
-16,-15	+	+	1	+	0
-18,-17	+	2	4	+	0
-20,-19	1	4	4	1	0
-22,-21	2	6	4	1	0
-24,-23	1	7	4	1	+
-26,-25	+	5	5	+	+
-28,-27	2	5	4	+	0
-30,-29	2	3	2	+	0
-32,-31	4	2	3	0	0
≤-33	1	3	2	0	0

Marine Area D

15 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	0	0	7	0	0
0,1	0	0	7	0	0
-2,-1	0	0	7	0	0
-4,-3	0	0	7	20	0
-6,-5	0	7	0	7	0
-8,-7	0	0	0	0	0
-10,-9	0	7	0	0	0
-12,-11	0	0	7	7	0
-14,-13	0	0	0	0	0
-16,-15	0	0	0	0	0
≤-17	0	0	13	7	0

7 Air Temperature Extremes

Decemb

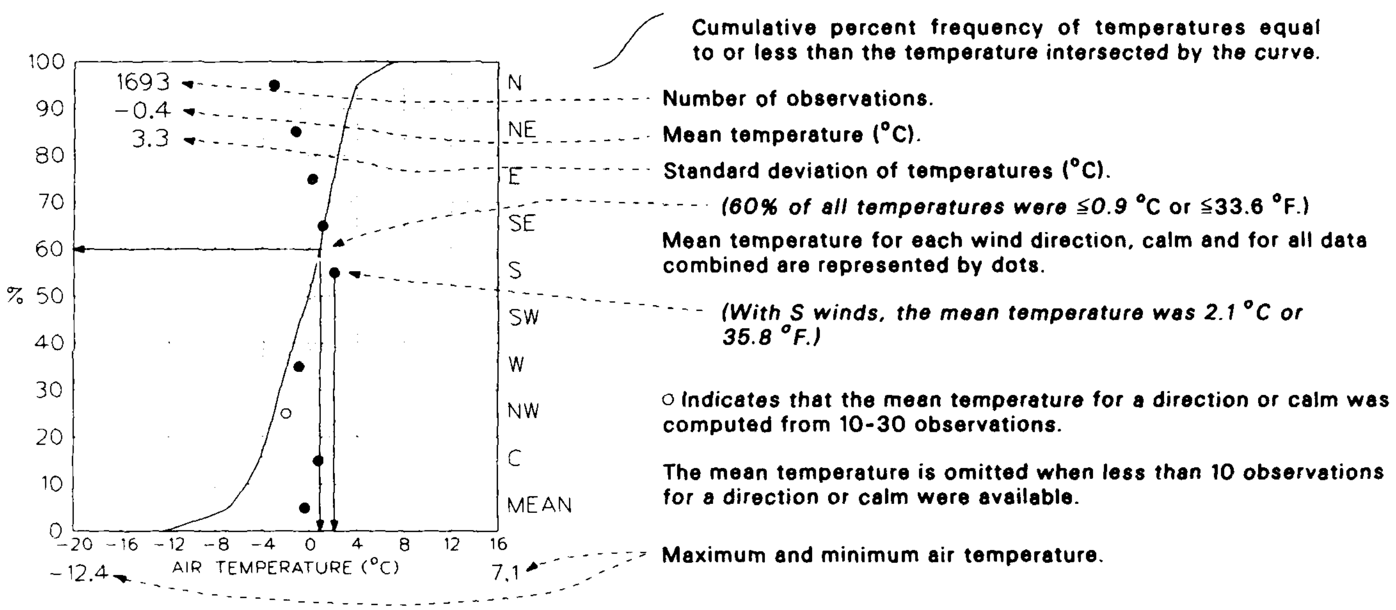
Map 8. Air temperature mean and frequency ≦0°C

BLACK LINE – Mean air temperature (°C).

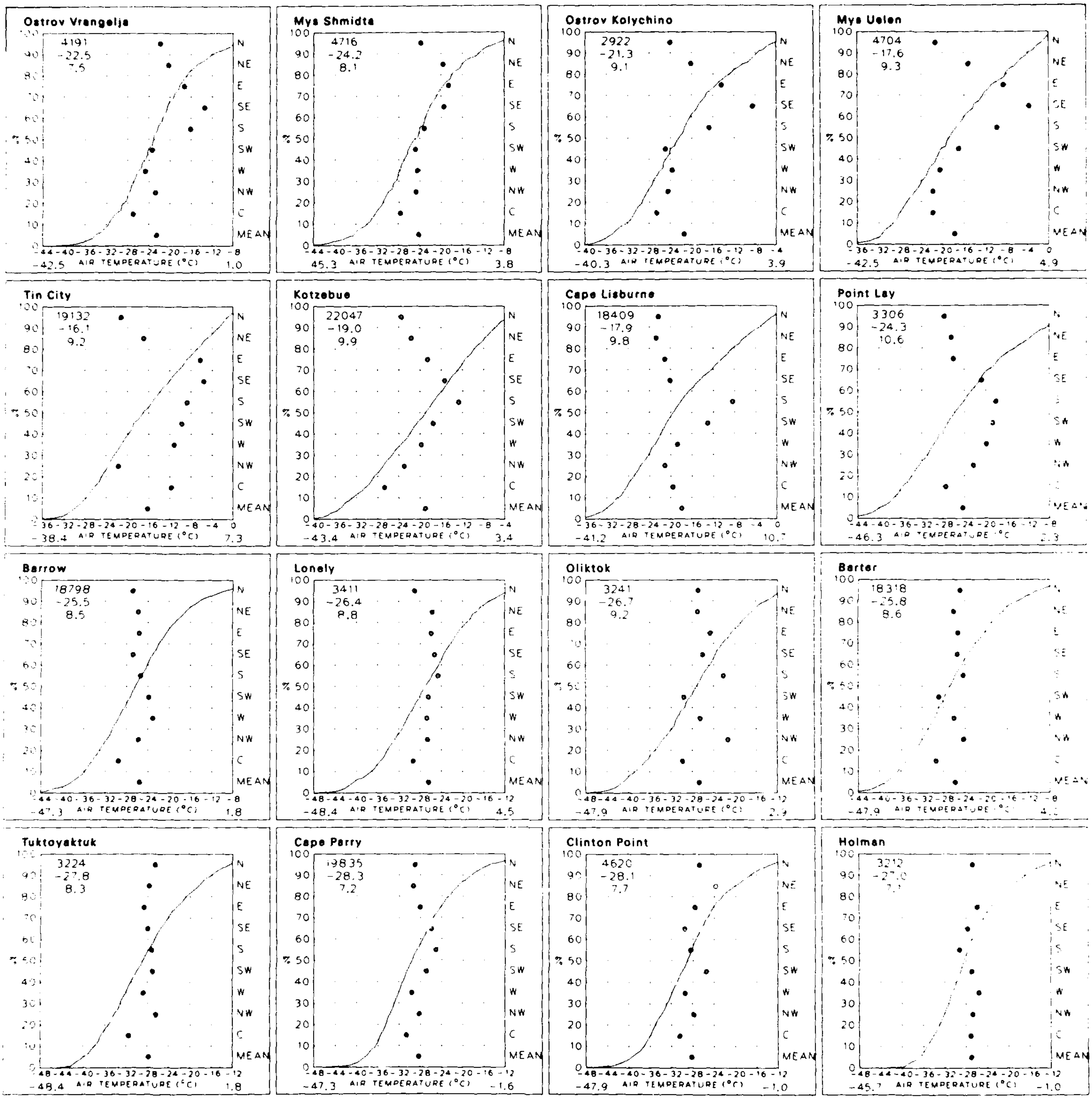
BLUE LINE – Percent frequency of temperature ≦0°C (≦32°F).

Albers Equal–Area Conic Projection

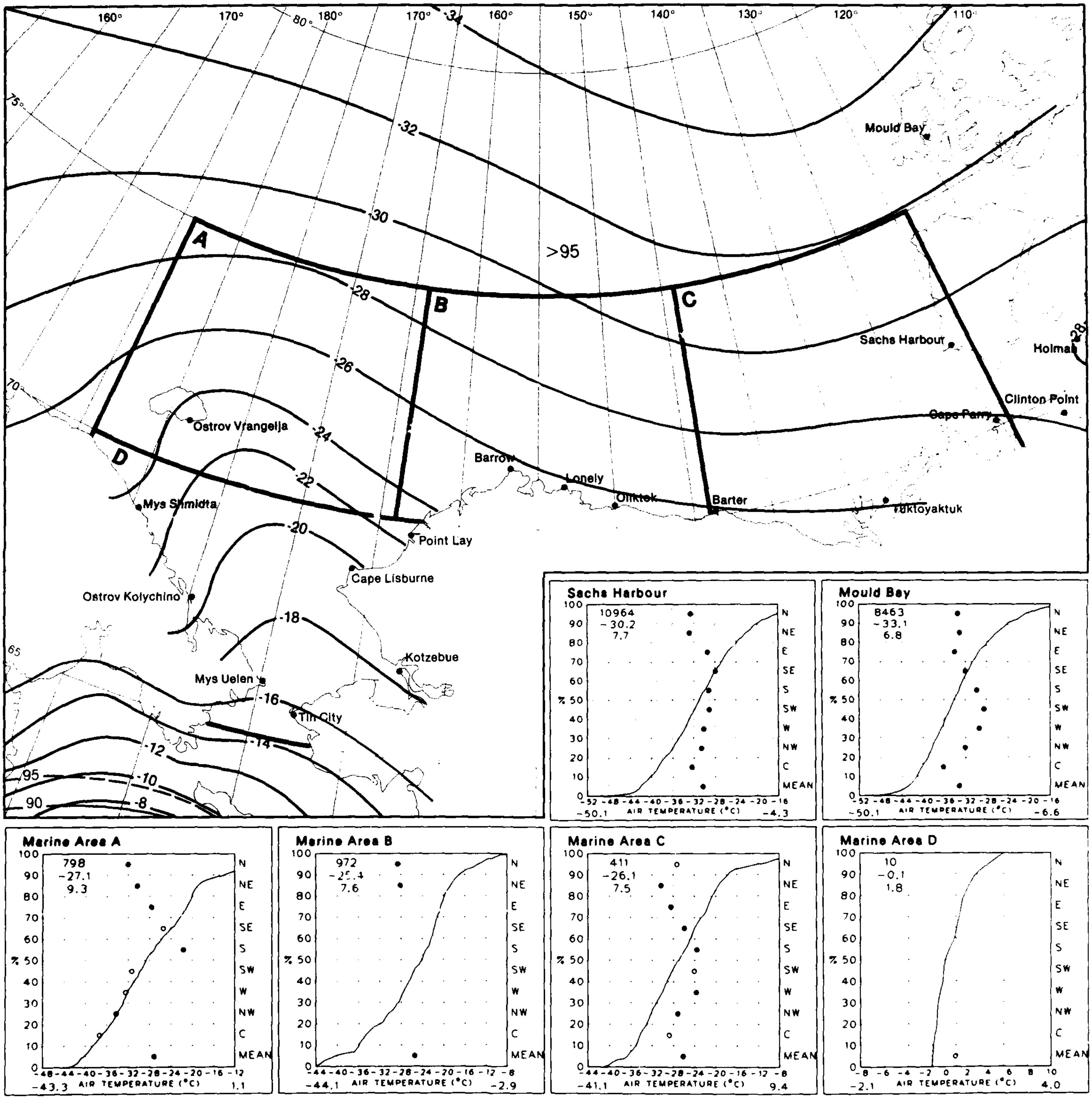
Graphs: Air temperature/wind direction



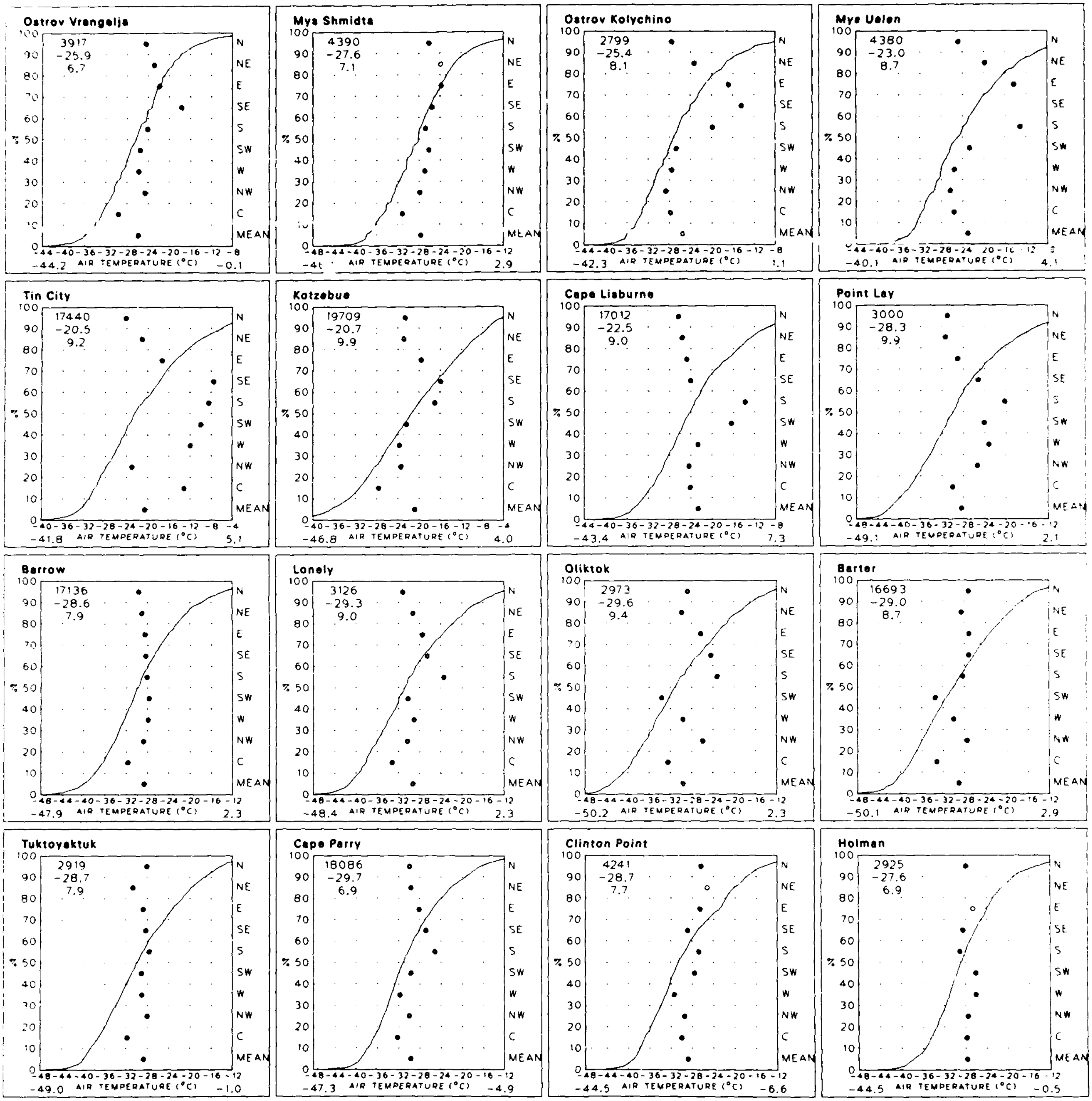
The temperature scale of the graphs varies in both range and class interval. The percent frequency of temperature observations greater than a given value can be obtained by subtracting the cumulative percent frequency of that value from 100%. The number of observations and the standard deviation, plus the plotted points on the graphs, are based on those observations reporting both temperature and wind direction. The cumulative curve is based on all observations reporting temperature with or without wind direction.

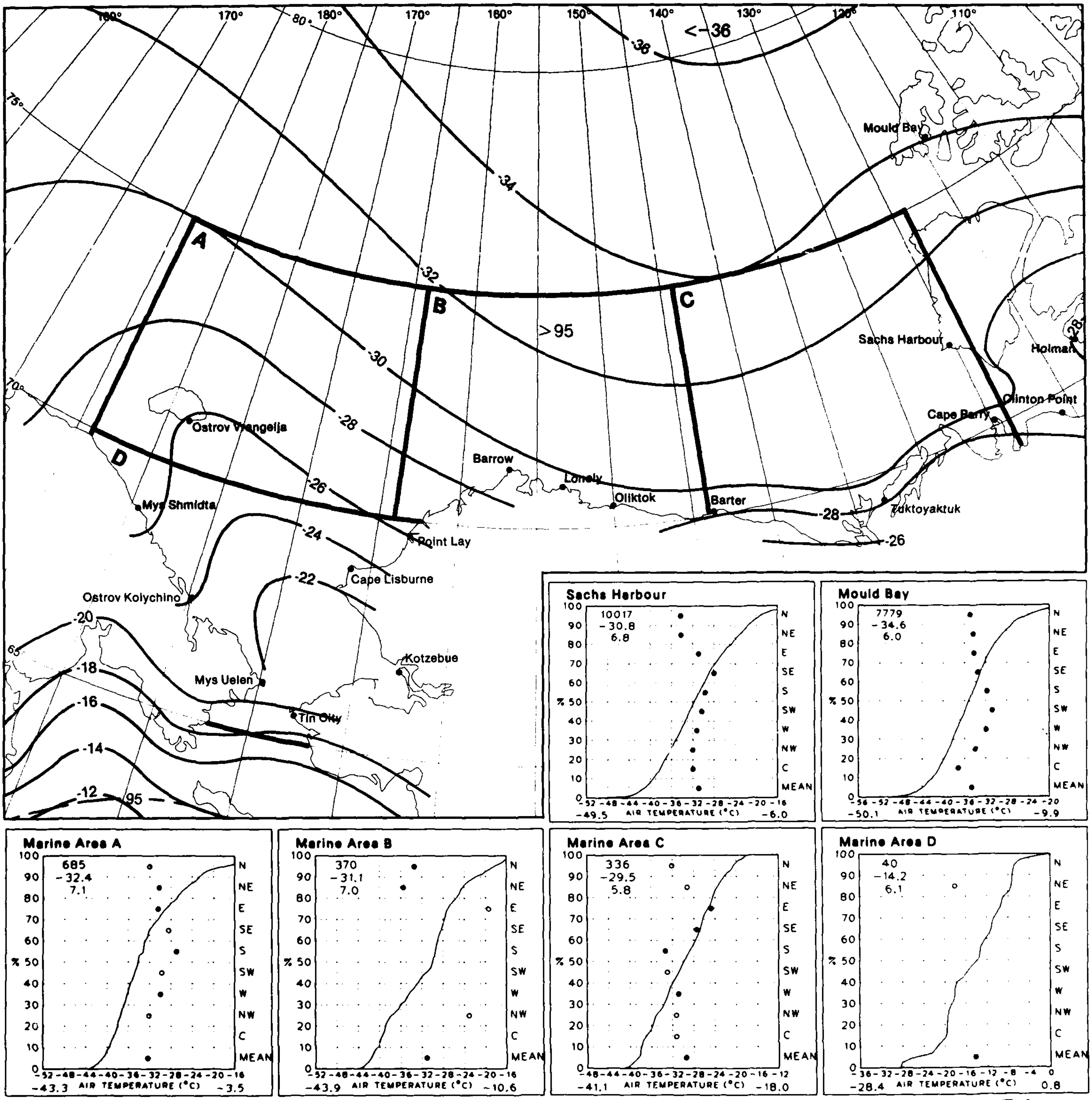


8 Air Temperature and Wind Direction



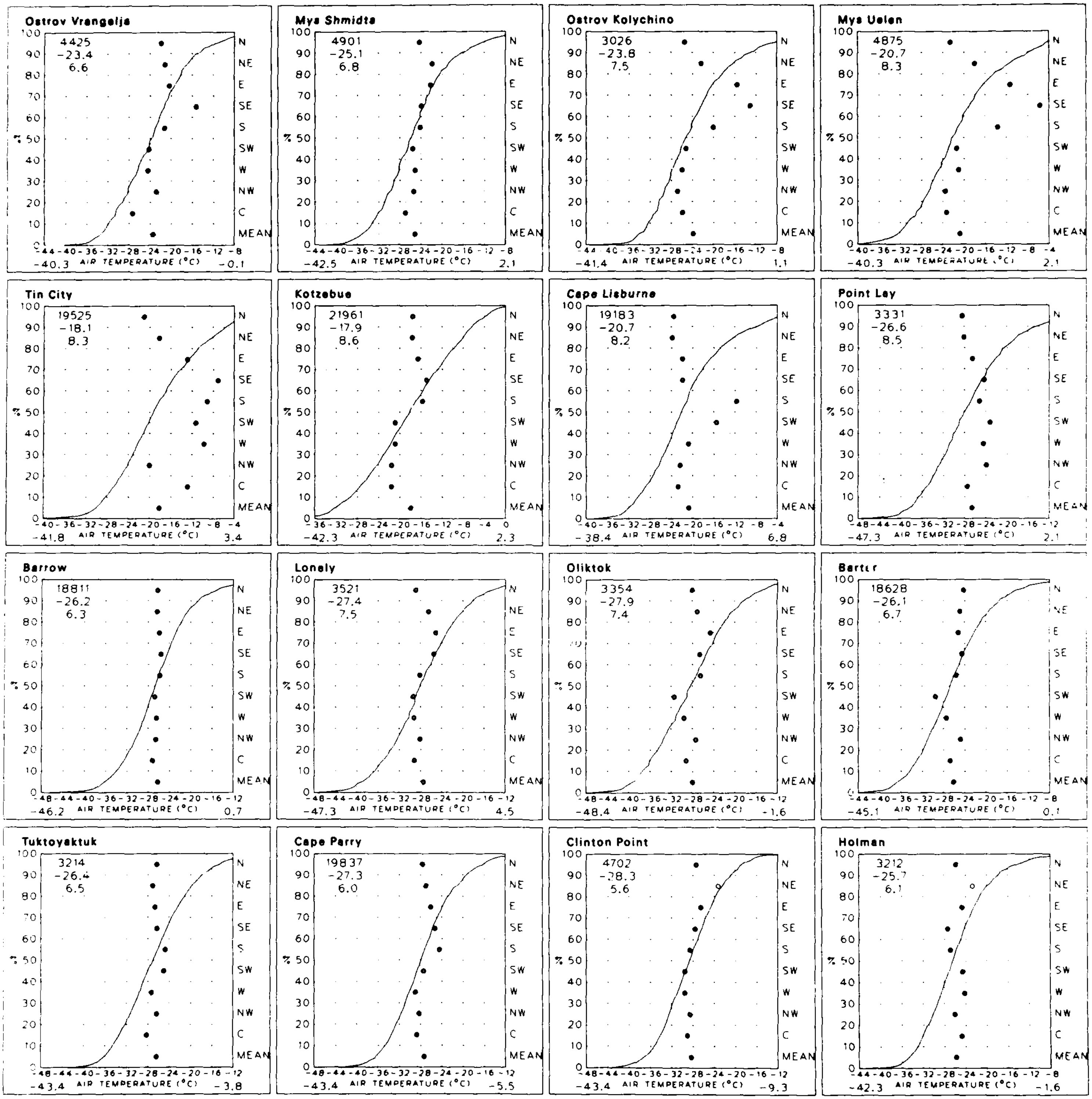
8 Air Temperature Mean and Frequency ≦0°C **January**

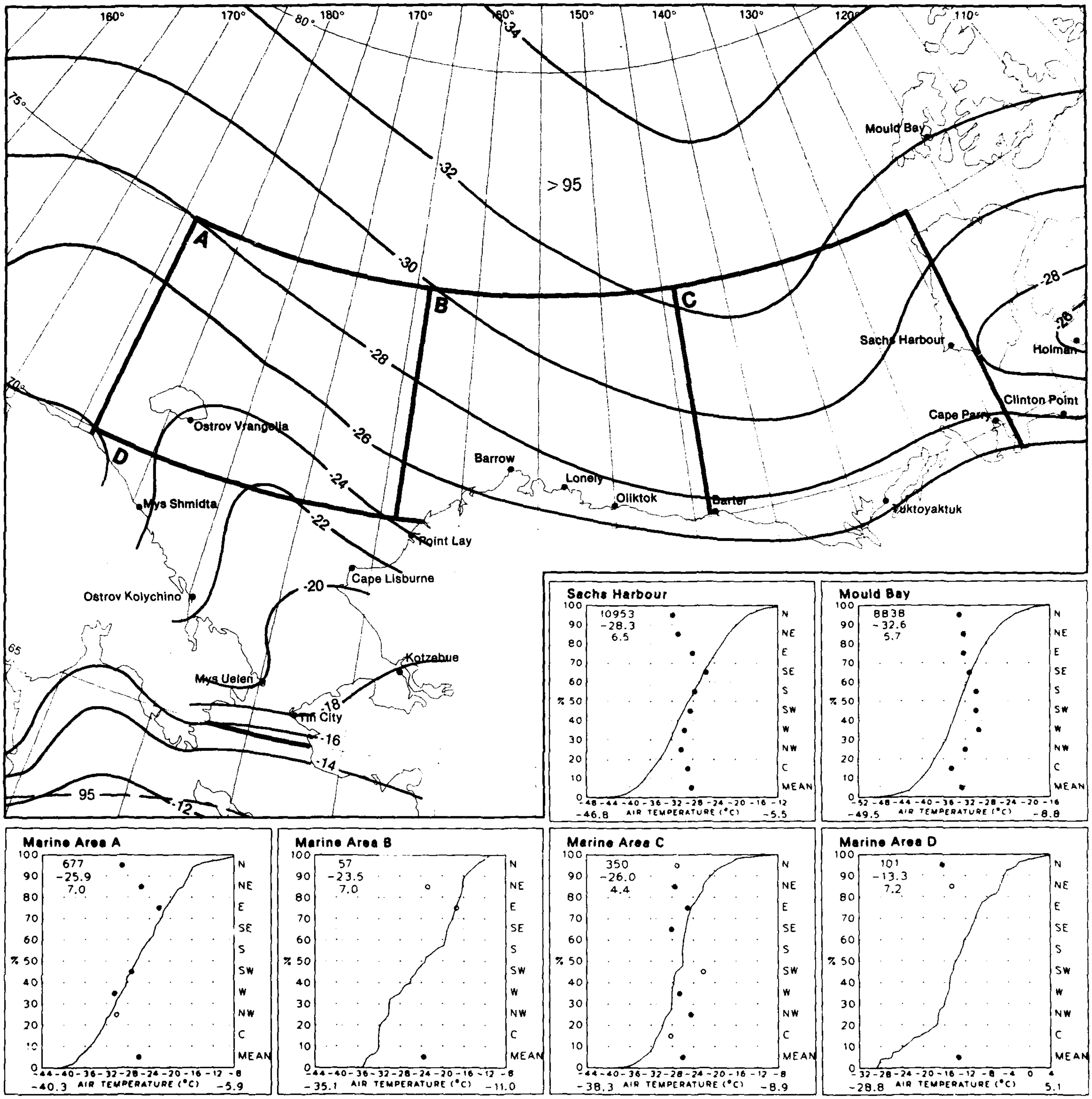

Ostrov Vrangelja
3917
-25.9
6.7
-44.2
-0.1
Mys Shmidta
4390
-27.6
7.1
2.9
Ostrov Kolychino
2799
-25.4
8.1
-42.3
1.1
Mys Uelen
4380
-23.0
8.7
-40.1
4.1
Tin City
17440
-20.5
9.2
-41.8
5.1
Kotzebue
19709
-20.7
9.9
-46.8
4.0
Cape Lisburne
17012
-22.5
9.0
-43.4
7.3
Point Lay
3000
-28.3
9.9
-49.1
2.1
Barrow
17136
-28.6
7.9
-47.9
2.3
Lonely
3126
-29.3
9.0
-48.4
2.3
Oliktok
2973
-29.6
9.4
-50.2
2.3
Barter
16693
-29.0
8.7
-50.1
2.9
Tuktoyaktuk
2919
-28.7
7.9
-49.0
-1.0
Cape Parry
18086
-29.7
6.9
-47.3
-4.9
Clinton Point
4241
-28.7
7.7
-44.5
-6.6
Holman
2925
-27.6
6.9
-44.5
-0.5
%
AIR TEMPERATURE (°C)
N
NE
E
SE
S
SW
W
NW
C
MEAN



8 Air Temperature Mean and Frequency ≦0°C

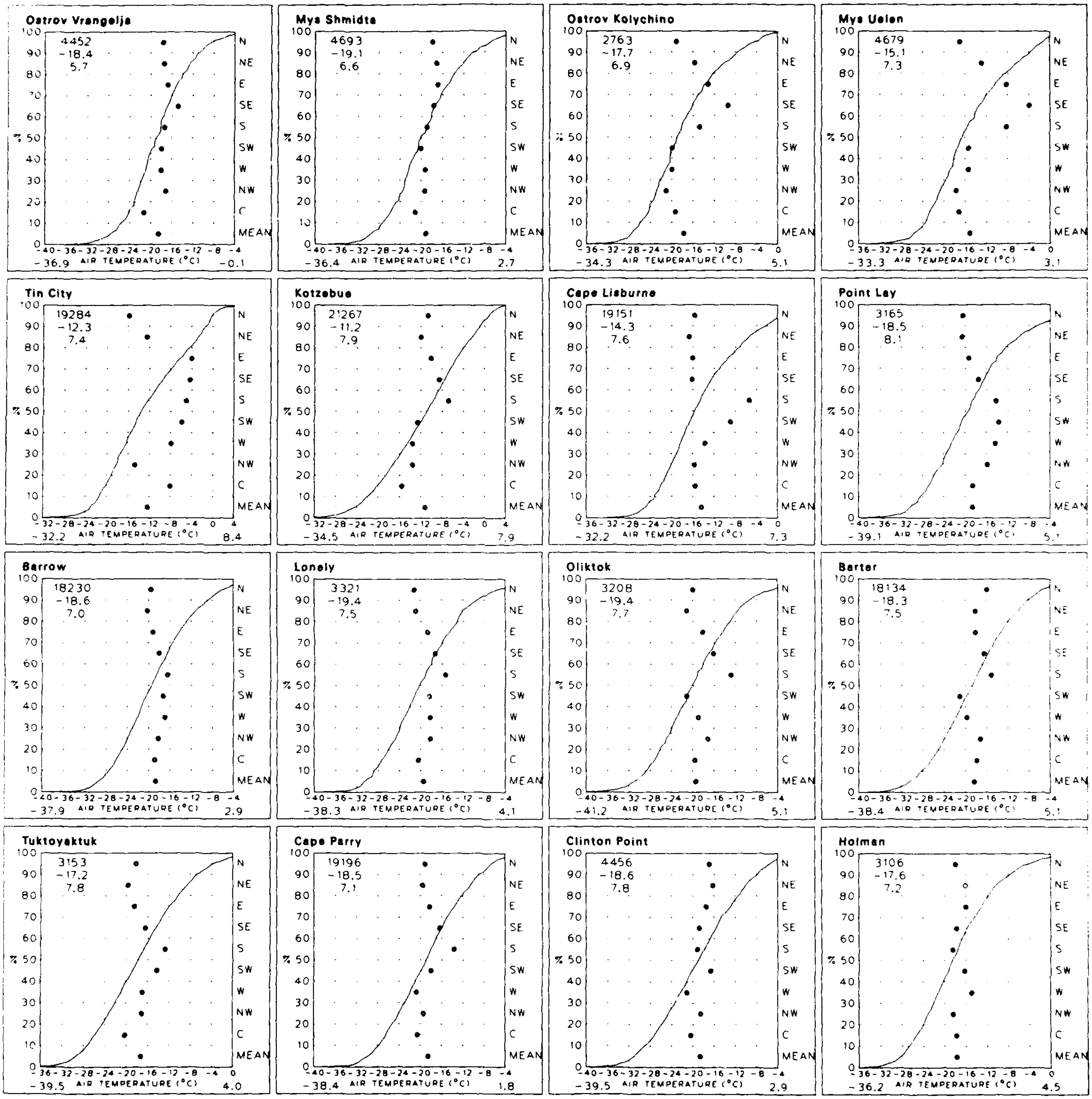
February


Ostrov Vrangelja
4425
-23.4
6.6
-40.3
-0.1
Mys Shmidta
4901
-25.1
6.8
-42.5
2.1
Ostrov Kolychino
3026
-23.8
7.5
-41.4
1.1
Mys Uelen
4875
-20.7
8.3
-40.3
2.1
Tin City
19525
-18.1
8.3
-41.8
3.4
Kotzebue
21961
-17.9
8.6
-42.3
2.3
Cape Lisburne
19183
-20.7
8.2
-38.4
6.8
Point Lay
3331
-26.6
8.5
-47.3
2.1
Barrow
18811
-26.2
6.3
-46.2
0.7
Lonely
3521
-27.4
7.5
-47.3
4.5
Oliktok
3354
-27.9
7.4
-48.4
-1.6
Barter
18628
-26.1
6.7
-45.1
0.1
Tuktoyaktuk
3214
-26.4
6.5
-43.4
-3.8
Cape Parry
19837
-27.3
6.0
-43.4
-5.5
Clinton Point
4702
-28.3
5.6
-43.4
-9.3
Holman
3212
-25.7
6.1
-42.3
-1.6
%
N
NE
E
SE
S
SW
W
NW
C
MEAN
AIR TEMPERATURE (°C)

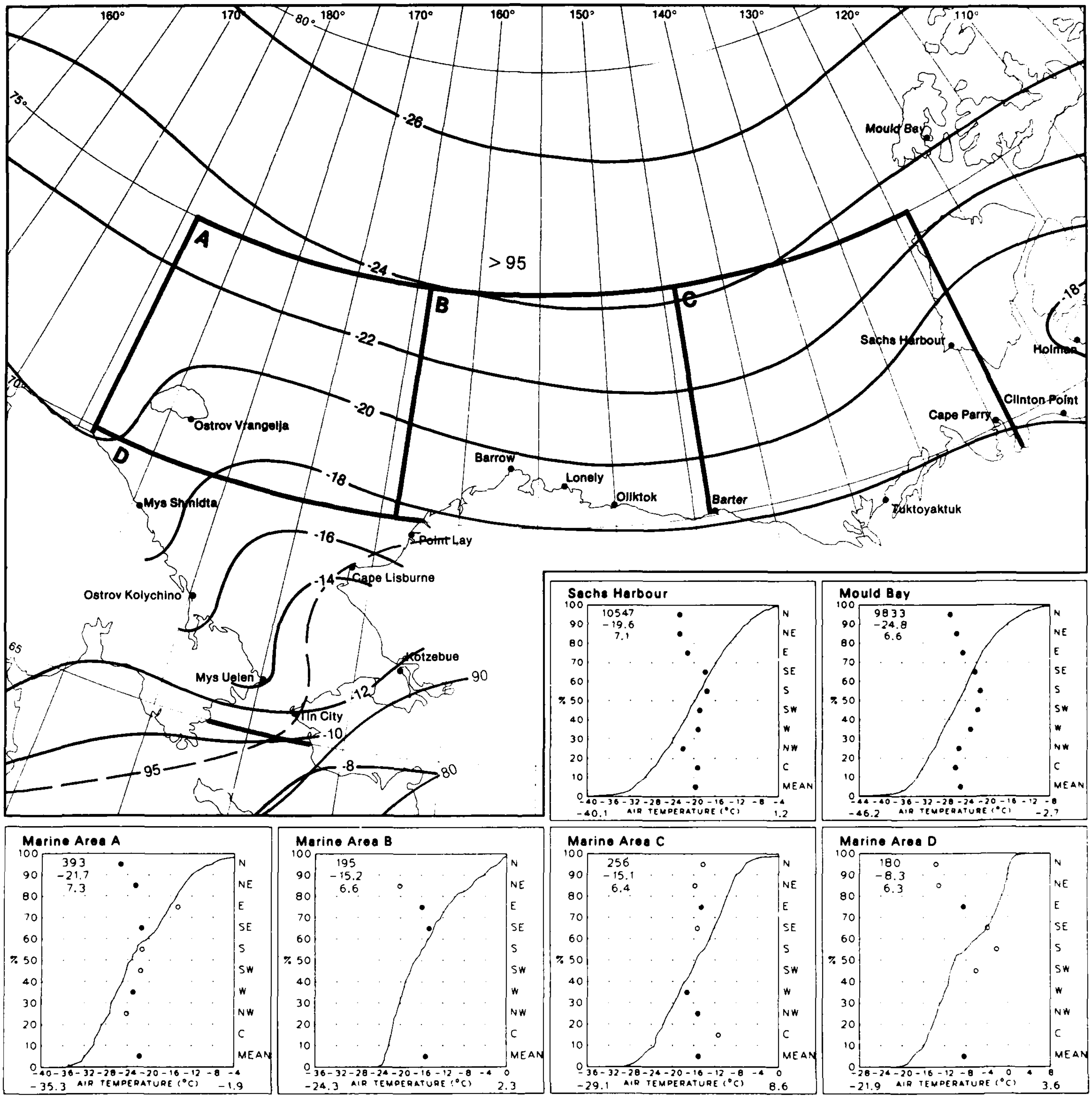


8 Air Temperature Mean and Frequency ≦0°C

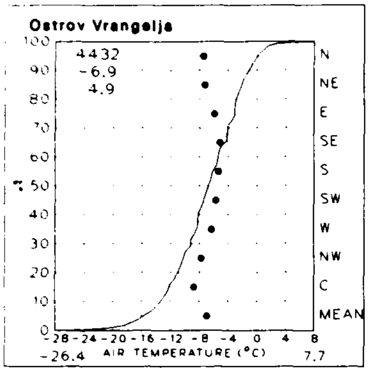
March

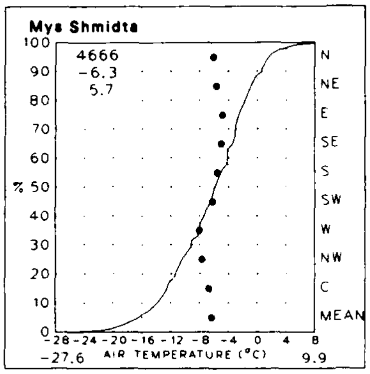


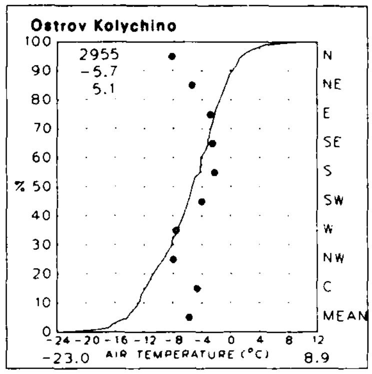
8 Air Temperature and Wind Direction

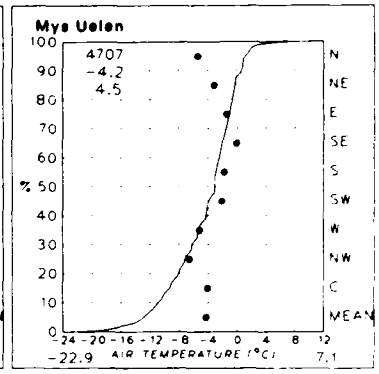


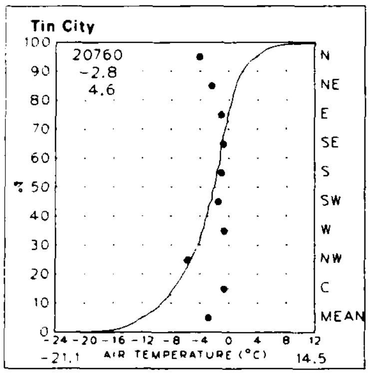
8 Air Temperature Mean and Frequency ≦0°C **April**

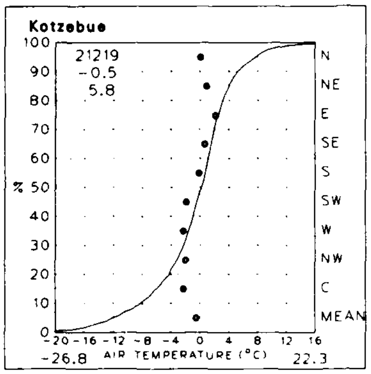

Ostrov Vrangelja
4432
-6.9
4.9
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-26.4
7.7

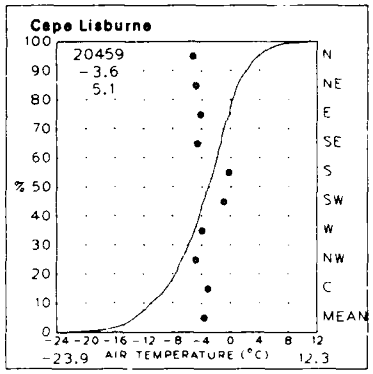

Mys Shmidta
4666
-6.3
5.7
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-27.6
9.9

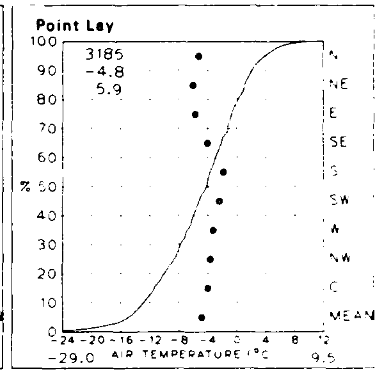

Ostrov Kolychino
2955
-5.7
5.1
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-23.0
8.9

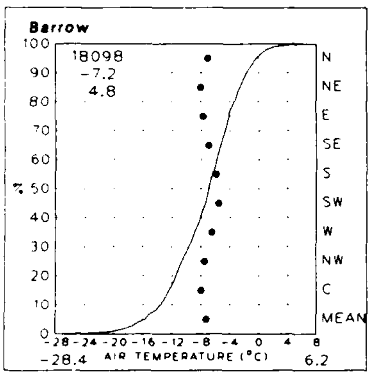

Mys Uelen
4707
-4.2
4.5
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-22.9
7.1

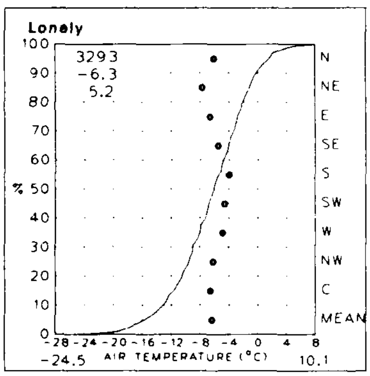

Tin City
20760
-2.8
4.6
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-21.1
14.5

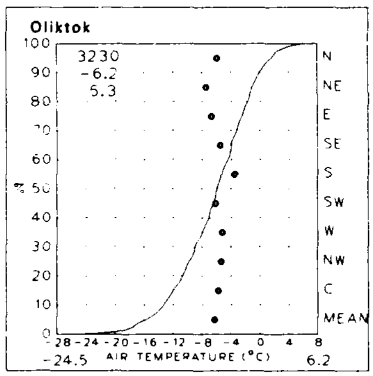

Kotzebue
21219
-0.5
5.8
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-26.8
22.3

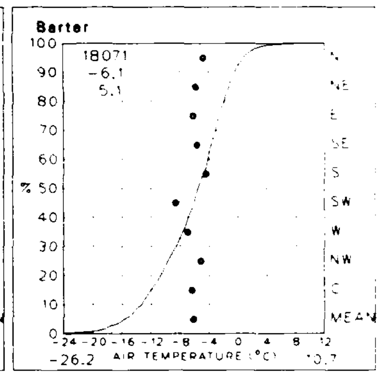

Cape Lisburne
20459
-3.6
5.1
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-23.9
12.3

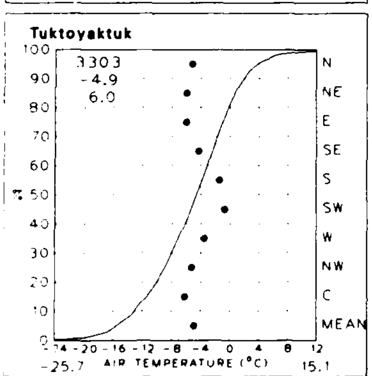

Point Lay
3185
-4.8
5.9
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-29.0
9.5

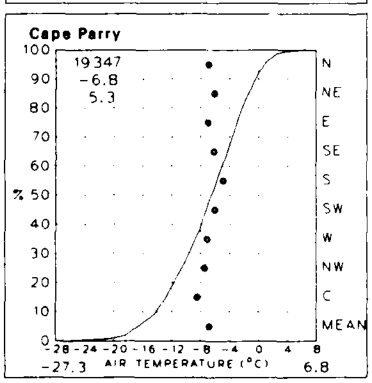

Barrow
18098
-7.2
4.8
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-28.4
6.2

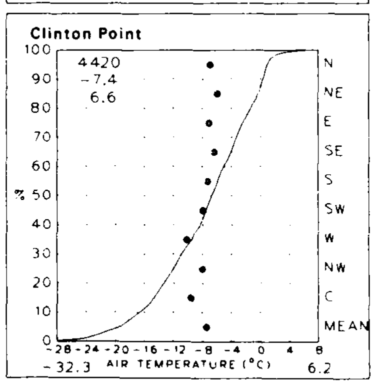

Lonely
3293
-6.3
5.2
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-24.5
10.1

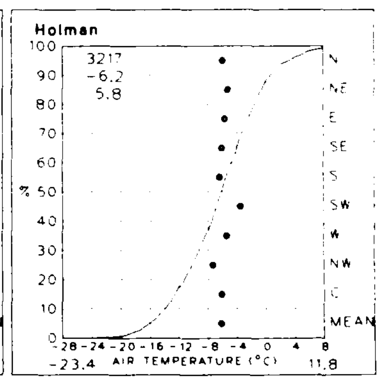

Oliktok
3230
-6.2
5.3
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-24.5
6.2

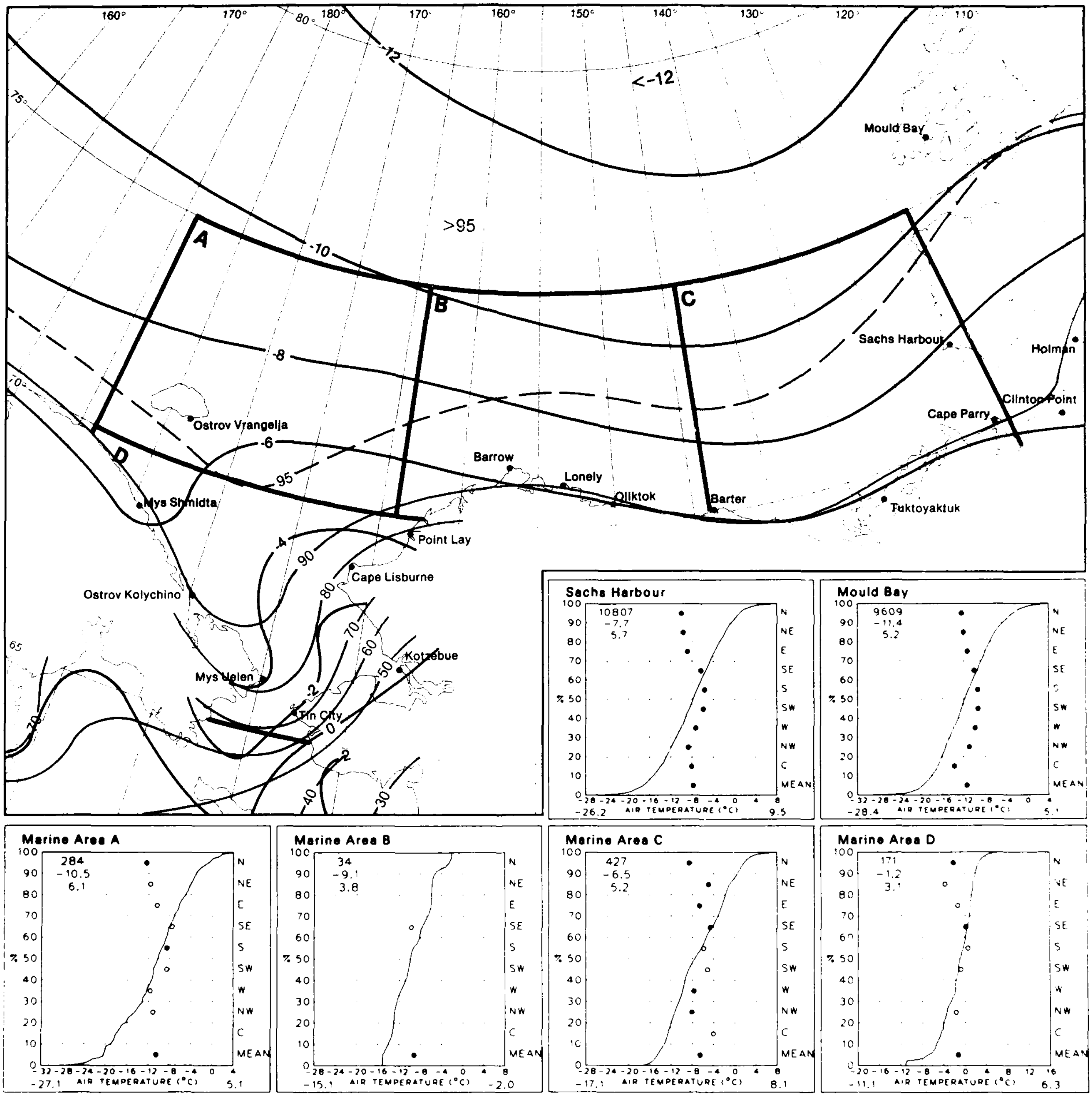

Barter
18071
-6.1
5.1
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-26.2
10.7


Tuktoyaktuk
3303
-4.9
6.0
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-25.7
15.1


Cape Parry
19347
-6.8
5.3
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-27.3
6.8

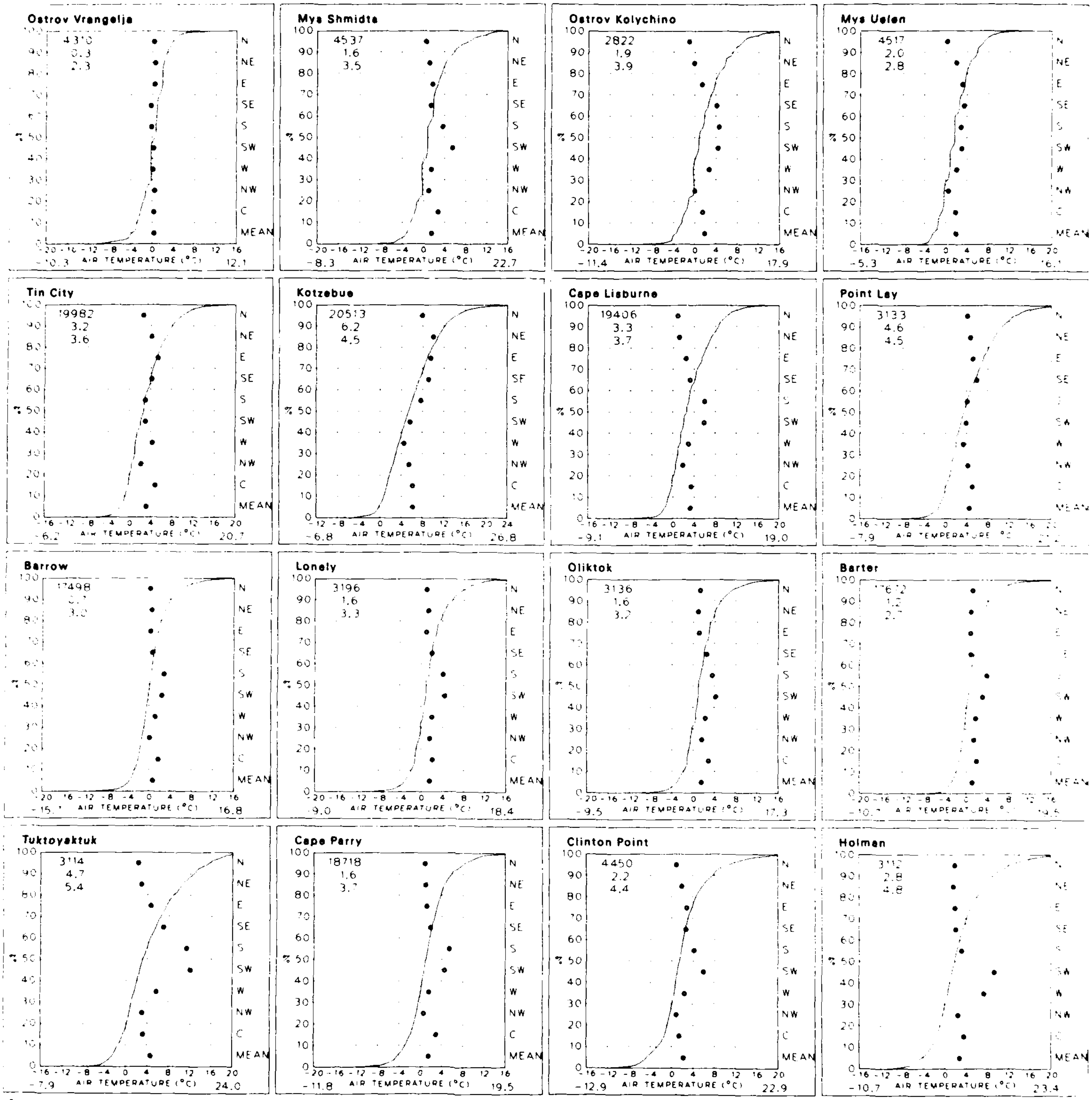

Clinton Point
4420
-7.4
6.6
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-32.3
6.2


Holman
3217
-6.2
5.8
N NE E SE S SW W NW C MEAN
%
AIR TEMPERATURE (°C)
-23.4
11.8



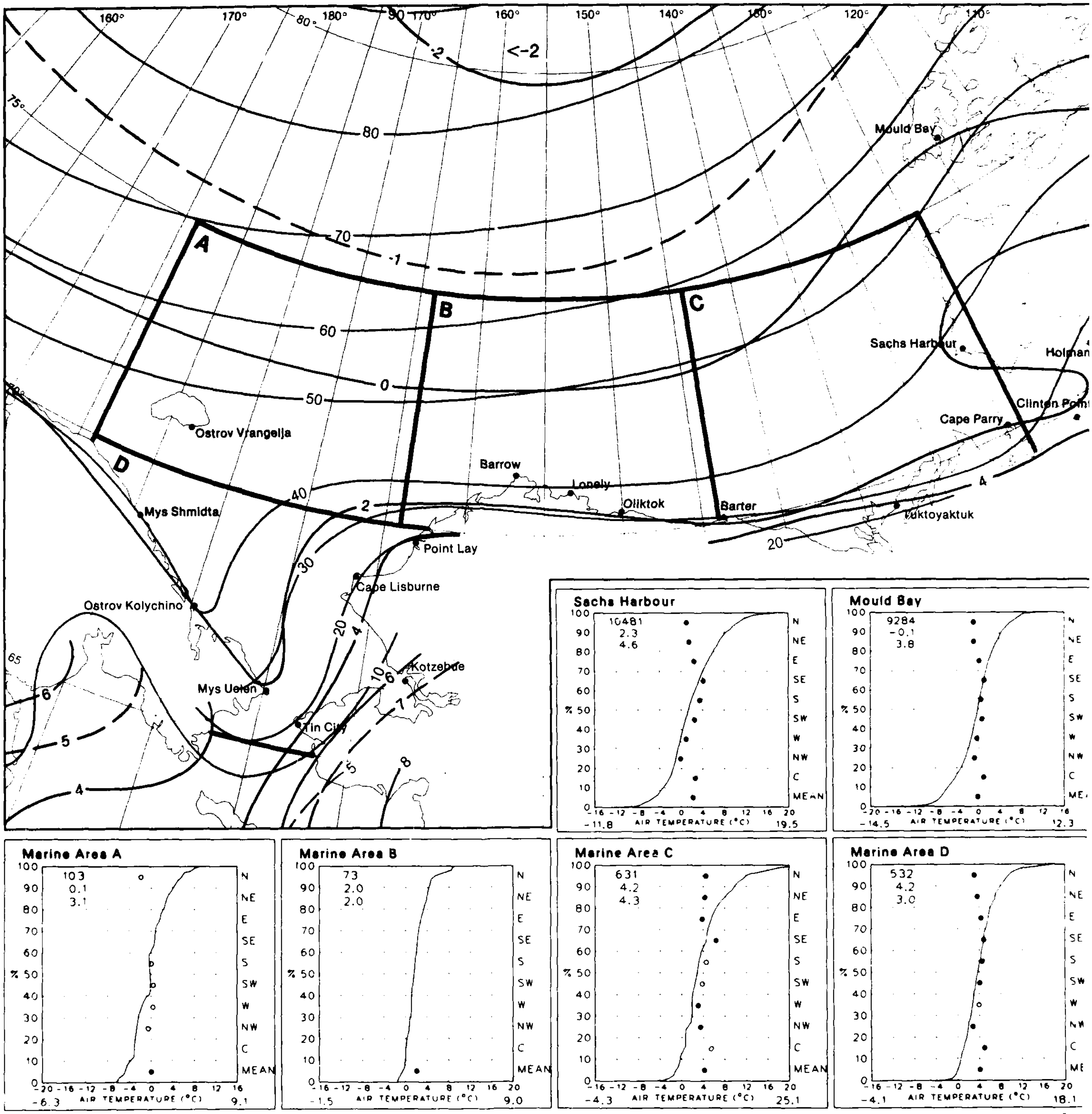
8 Air Temperature Mean and Frequency ≦0°C

May



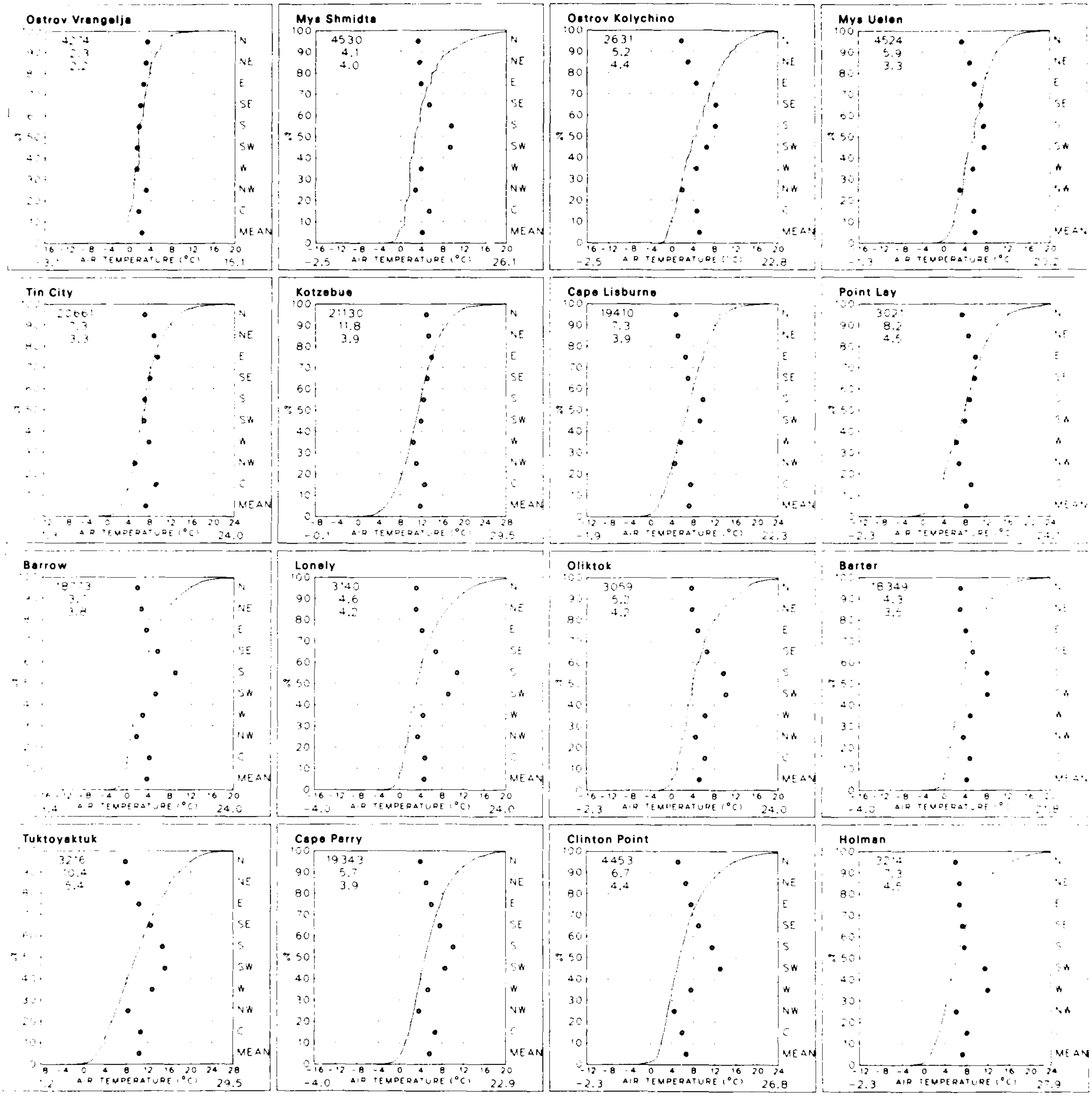
June

8 Air Temperature and Wind Direction



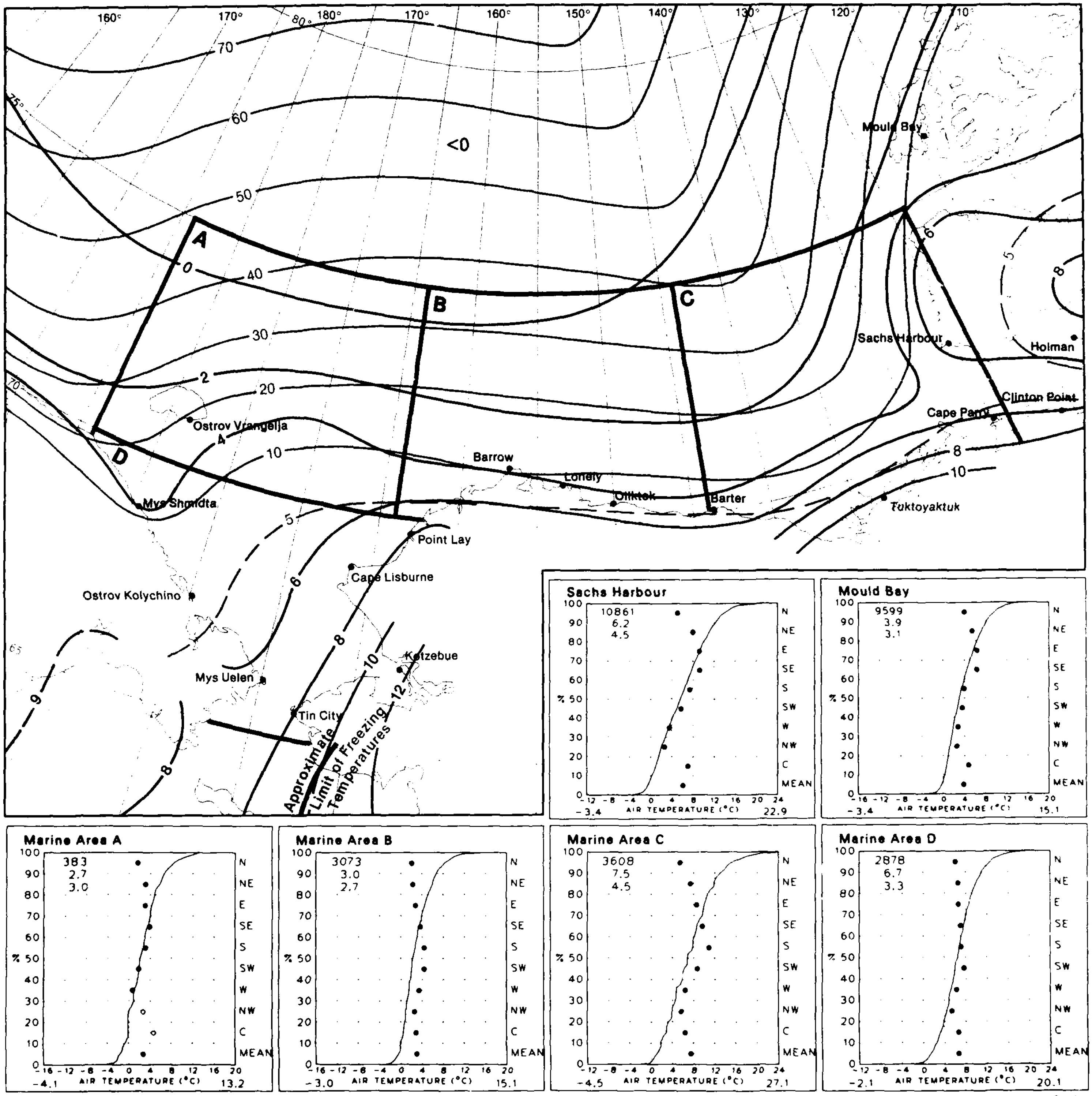
8 Air Temperature Mean and Frequency ≦0°C

Ju

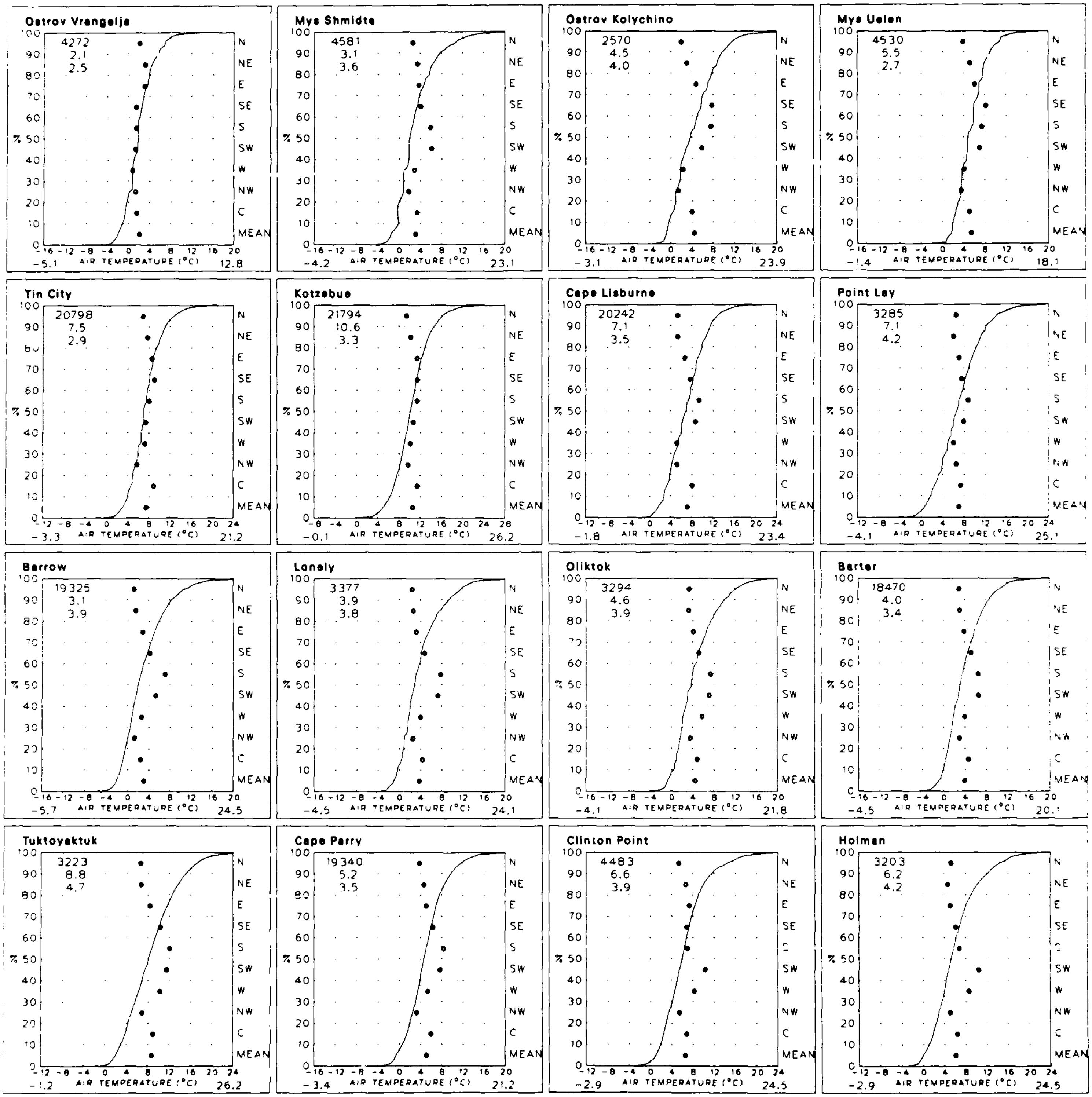


July

8 Air Temperature and Wind Direction

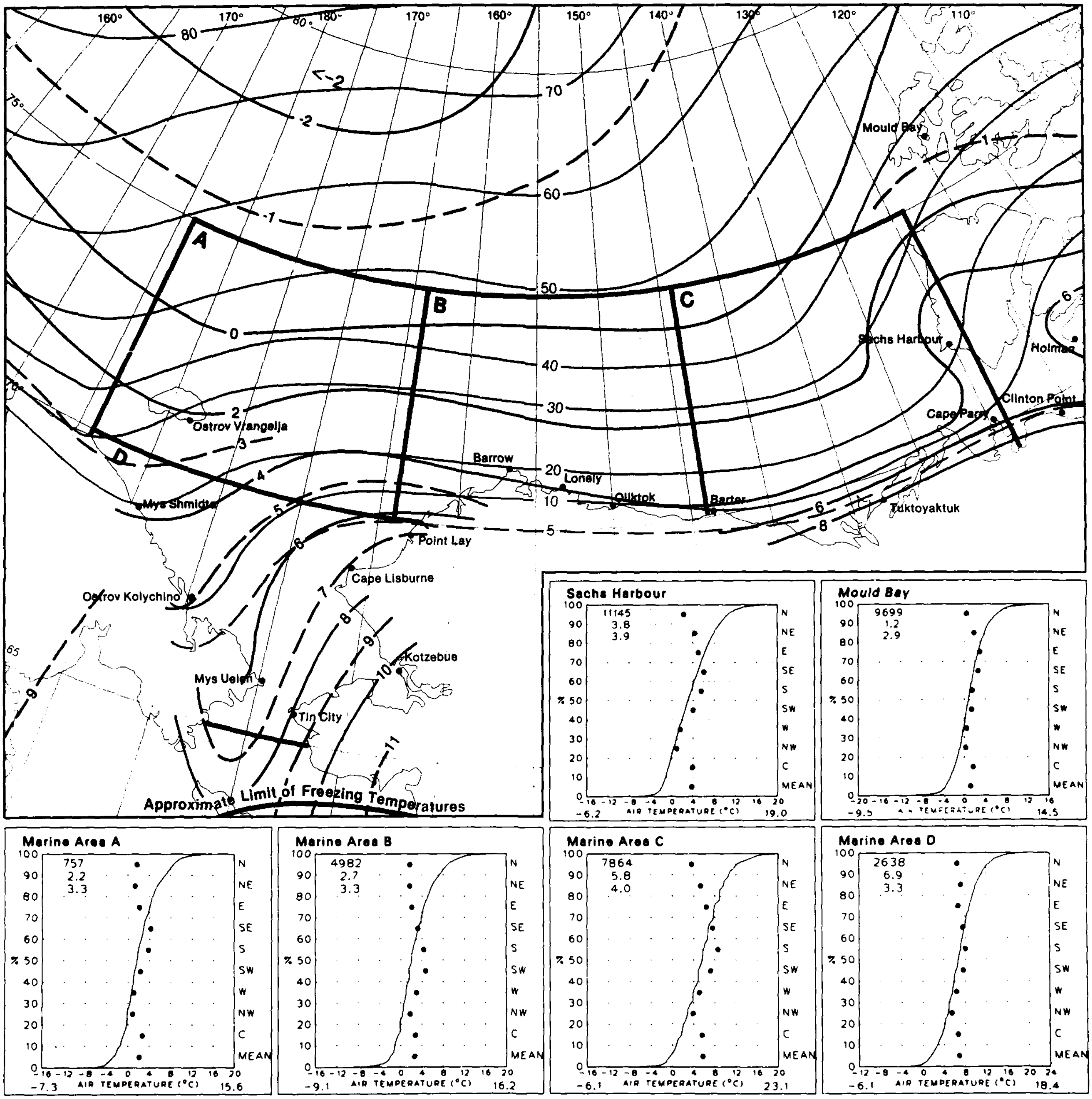


8 Air Temperature Mean and Frequency ≤0°C July



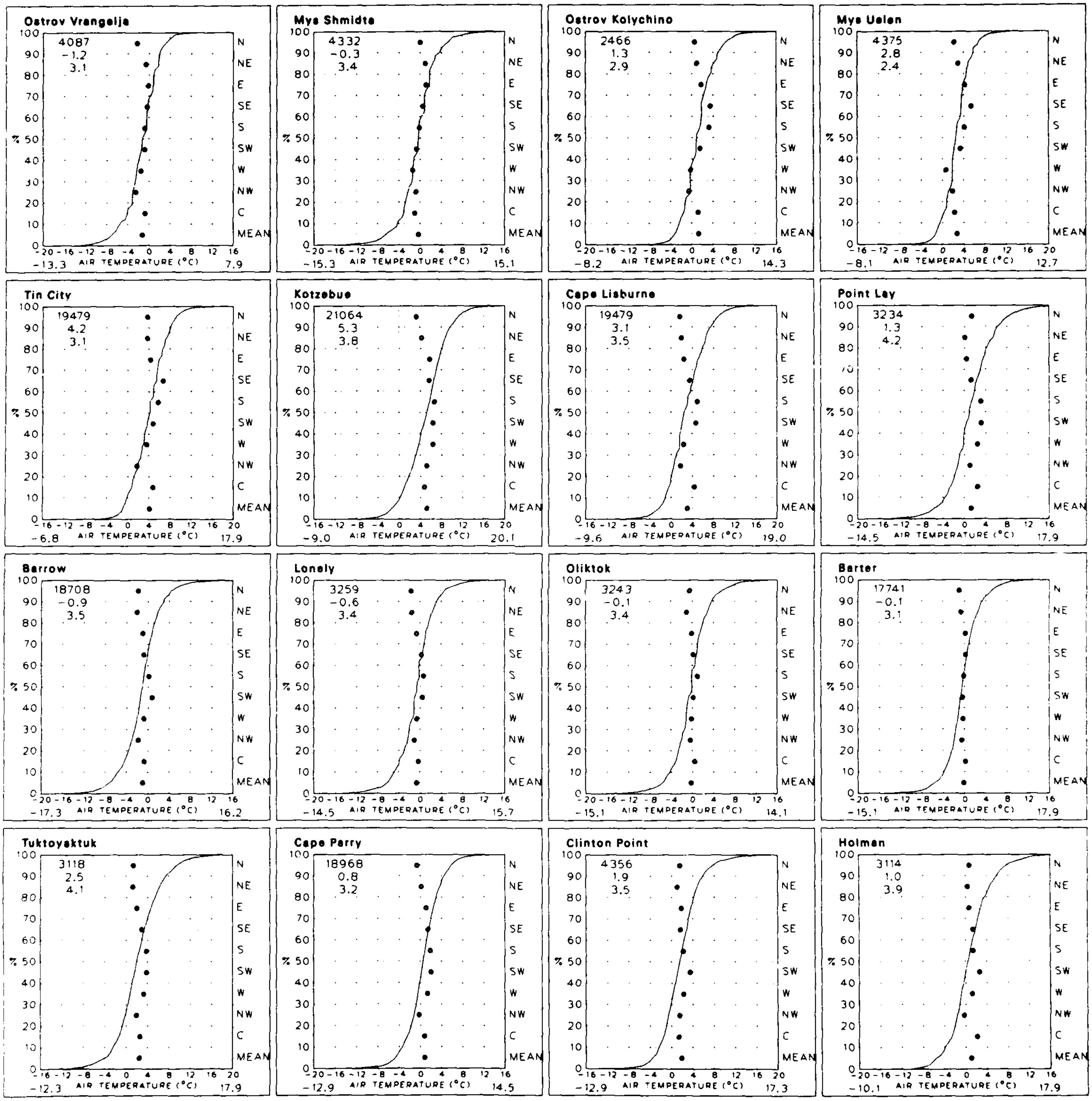
August

8 Air Temperature and Wind Direction

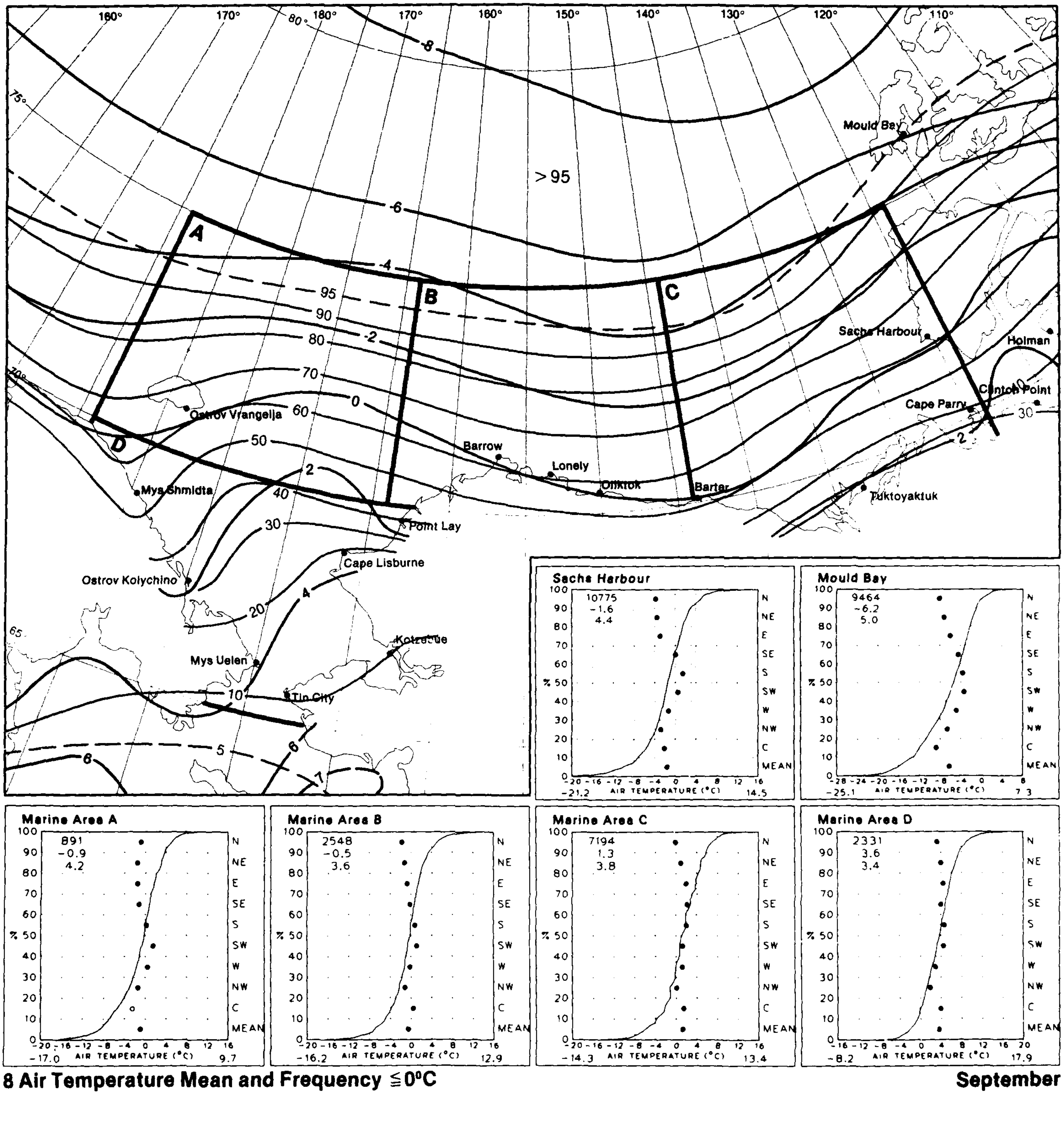


8 Air Temperature Mean and Frequency ≦0°C

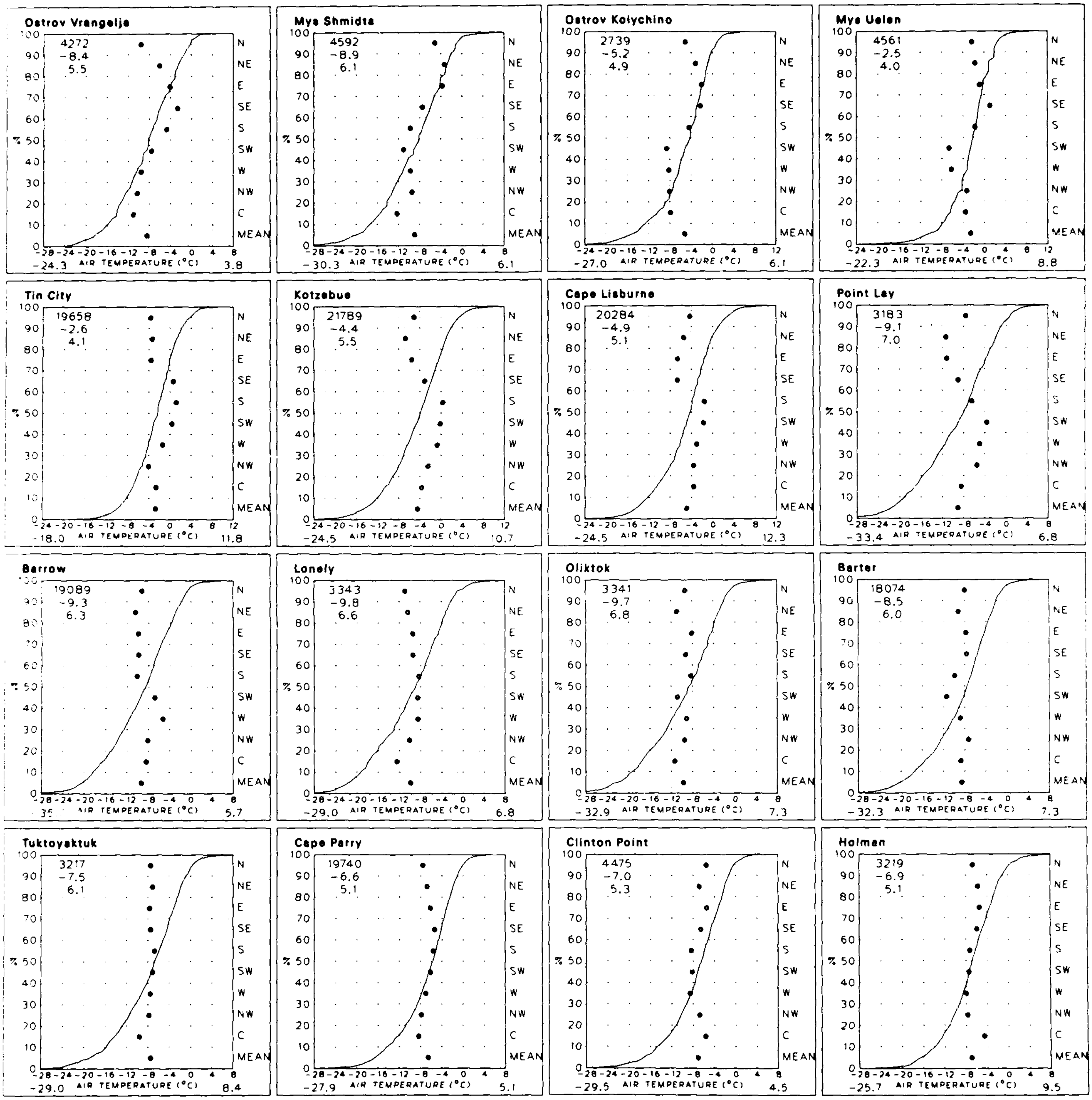
August

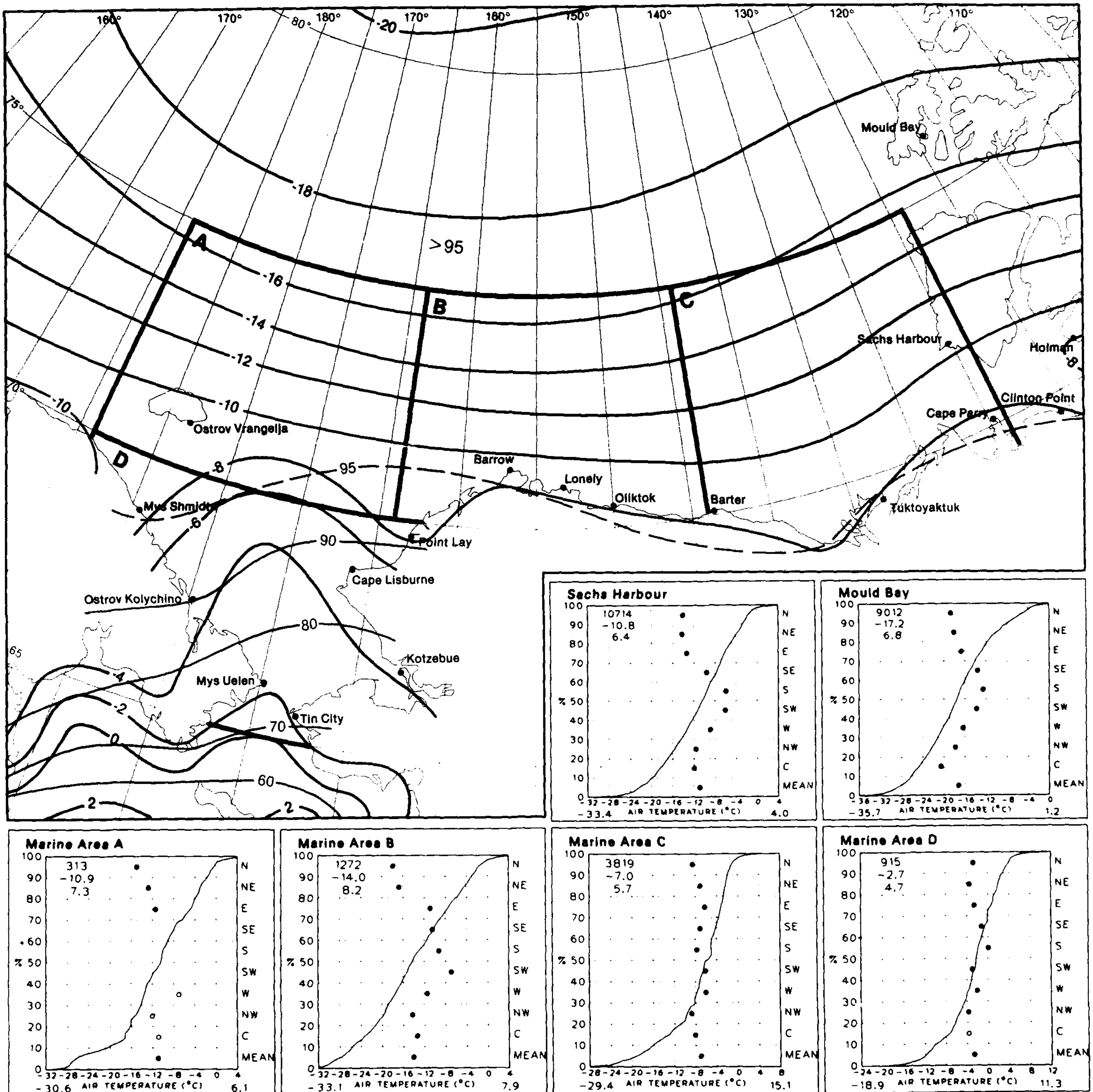


September **8 Air Temperature and Wind Direction**



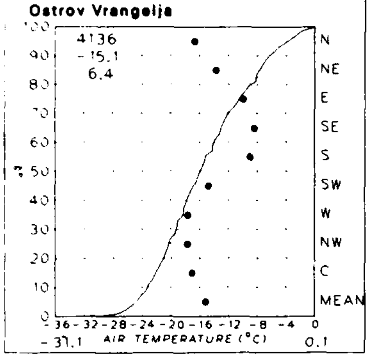
8 Air Temperature Mean and Frequency ≦0°C **September**


Ostrov Vrangelja
4272
-8.4
5.5
-24.3
3.8
Mys Shmidta
4592
-8.9
6.1
-30.3
6.1
Ostrov Kolychino
2739
-5.2
4.9
-27.0
6.1
Mys Uelen
4561
-2.5
4.0
-22.3
8.8
Tin City
19658
-2.6
4.1
-18.0
11.8
Kotzebue
21789
-4.4
5.5
-24.5
10.7
Cape Lisburne
20284
-4.9
5.1
-24.5
12.3
Point Lay
3183
-9.1
7.0
-33.4
6.8
Barrow
19089
-9.3
6.3
5.7
Lonely
3343
-9.8
6.6
-29.0
6.8
Oliktok
3341
-9.7
6.8
-32.9
7.3
Barter
18074
-8.5
6.0
-32.3
7.3
Tuktoyaktuk
3217
-7.5
6.1
-29.0
8.4
Cape Parry
19740
-6.6
5.1
-27.9
5.1
Clinton Point
4475
-7.0
5.3
-29.5
4.5
Holman
3219
-6.9
5.1
-25.7
9.5
%
N
NE
E
SE
S
SW
W
NW
C
MEAN
AIR TEMPERATURE (°C)

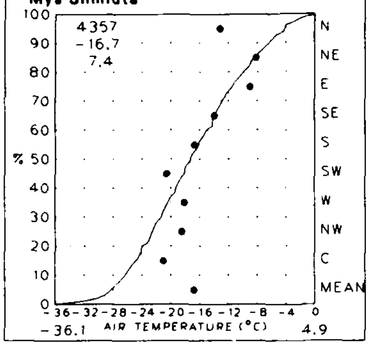


8 Air Temperature Mean and Frequency ≤0°C **October**

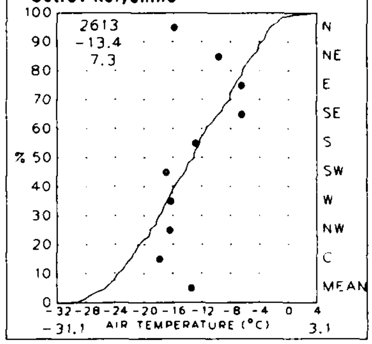
Ostrov Vrangelja



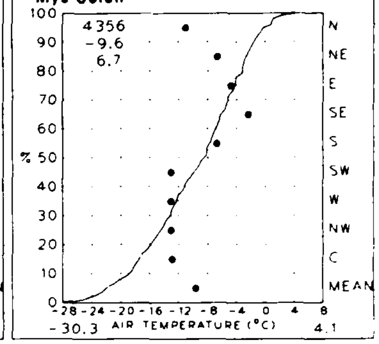
Mys Shmidta



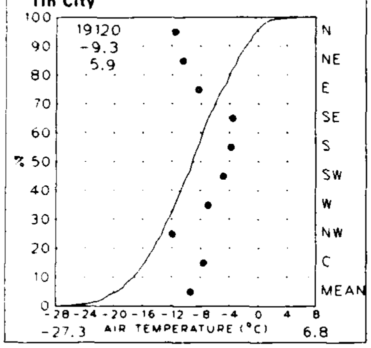
Ostrov Kolychino



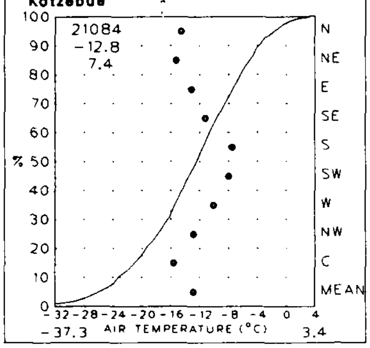
Mys Uelen



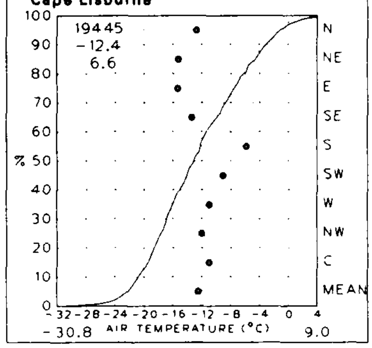
Tin City



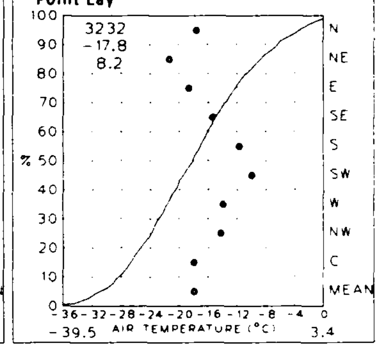
Kotzebue



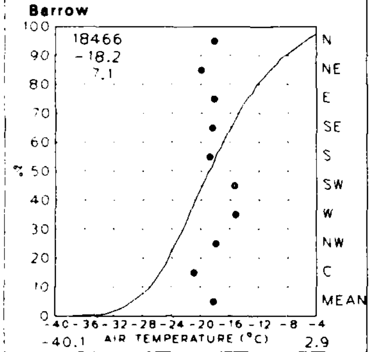
Cape Lisburne



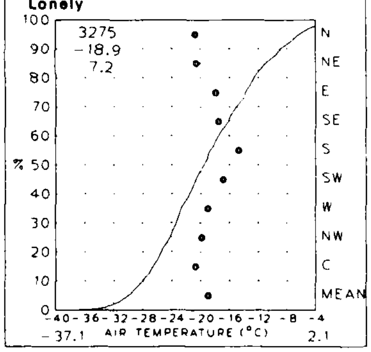
Point Lay



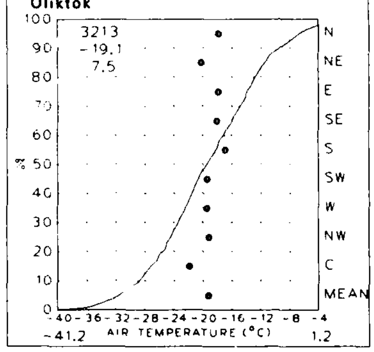
Barrow



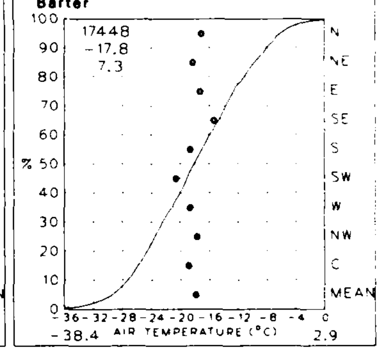
Lonely



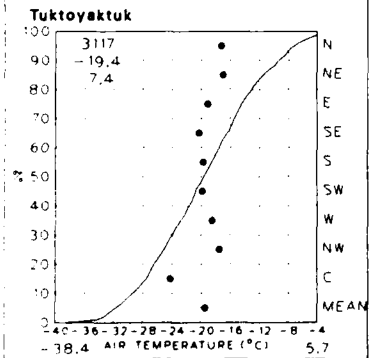
Oliktok



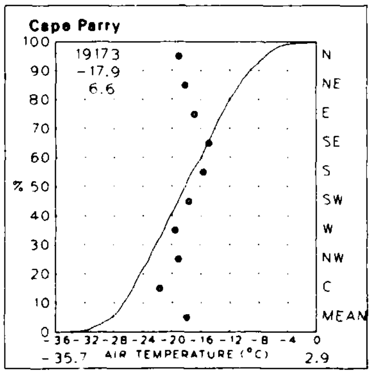
Barter



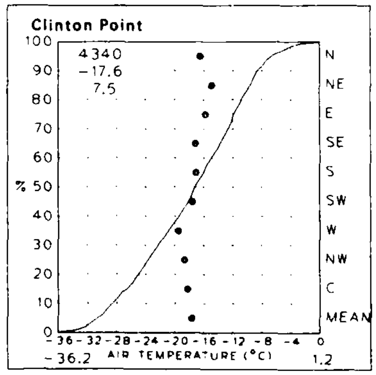
Tuktoyaktuk



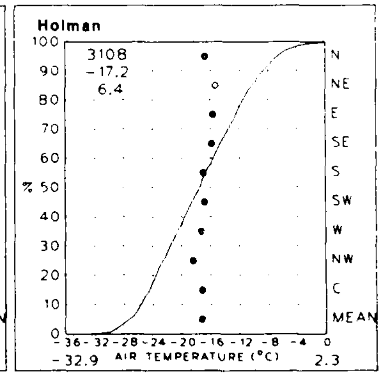
Cape Parry

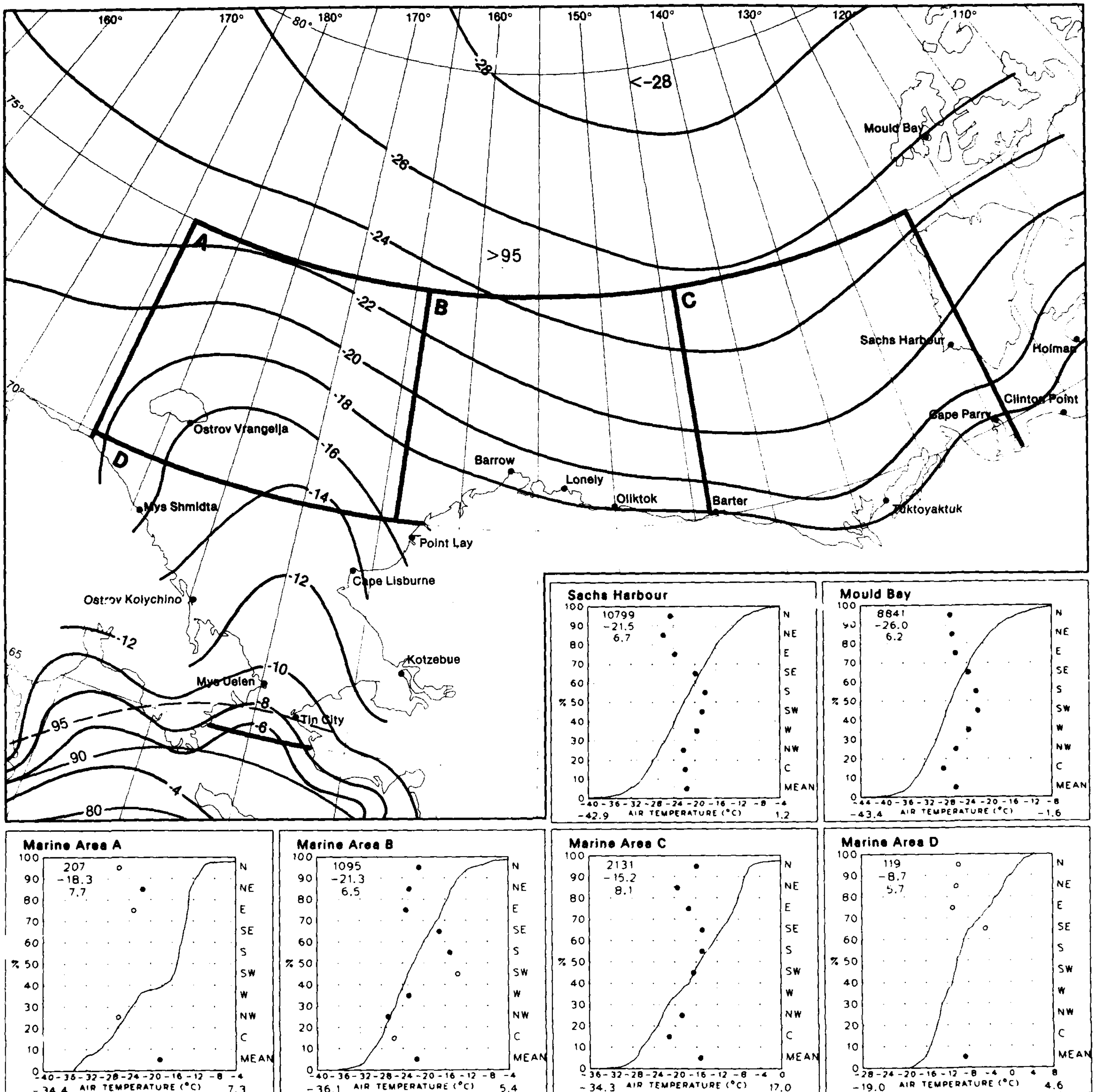


Clinton Point



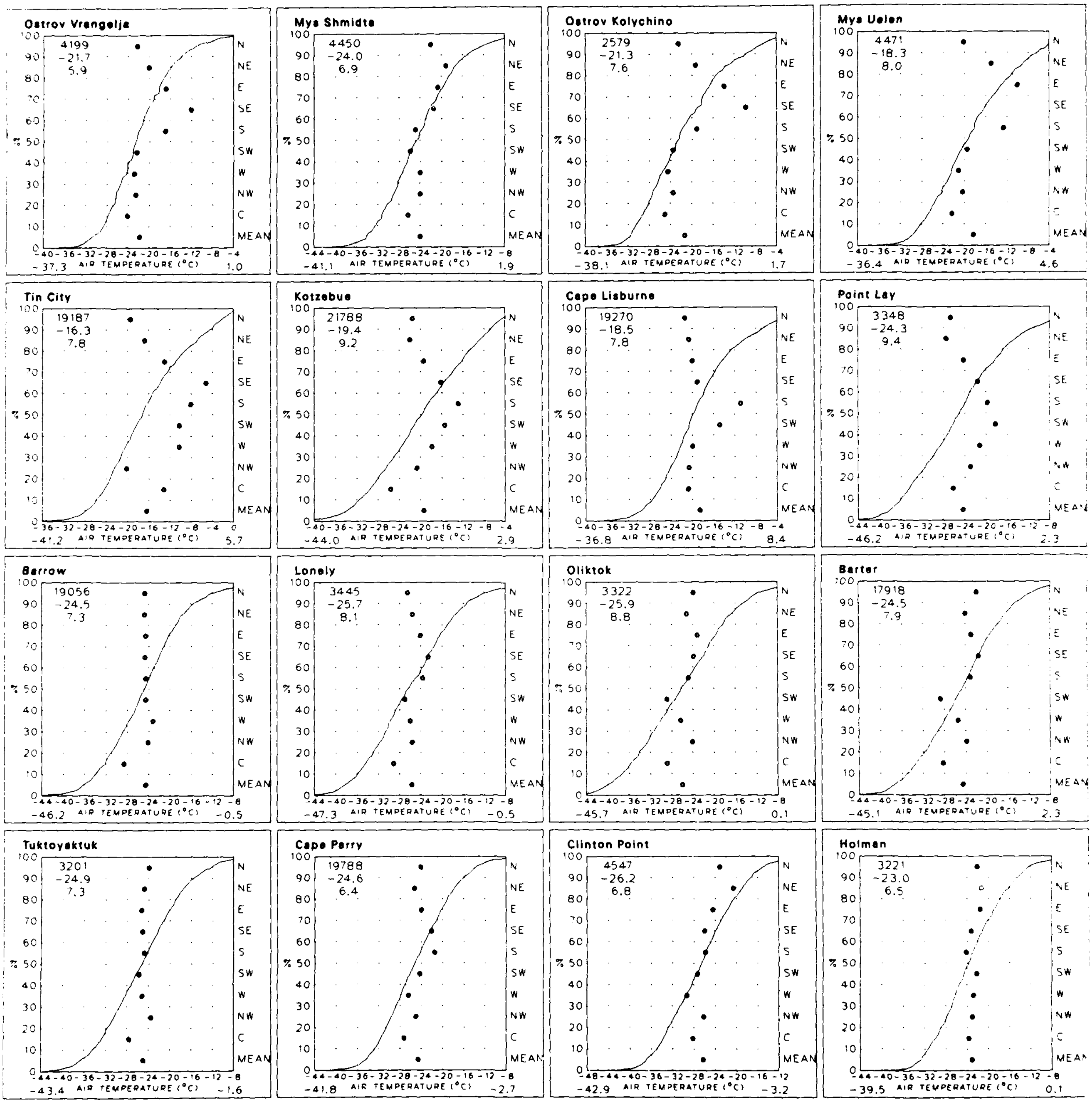
Holman

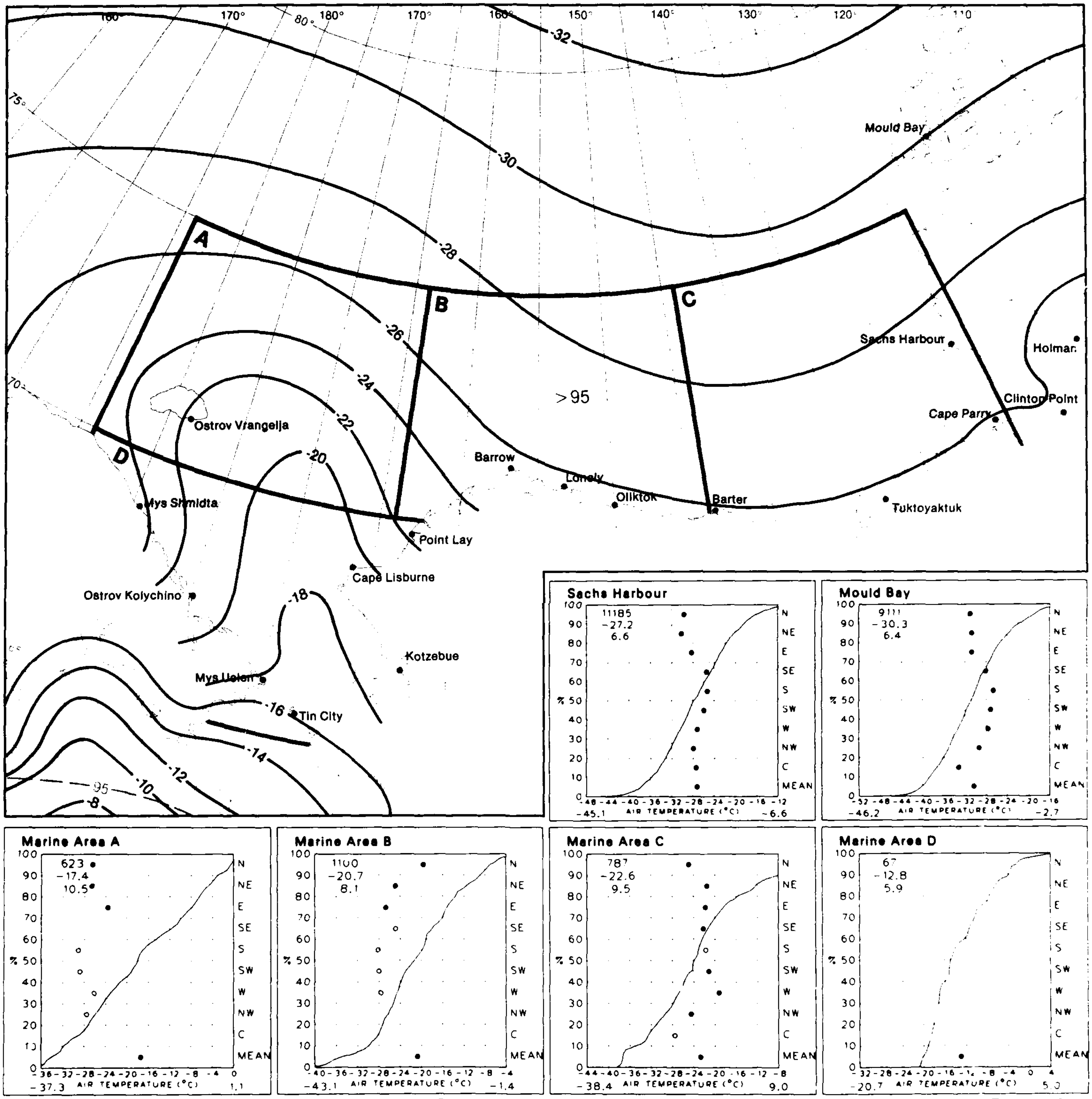




8 Air Temperature Mean and Frequency ≦0°C

November


Ostrov Vrangelja
4199
-21.7
5.9
-37.3
1.0
Mys Shmidta
4450
-24.0
6.9
-41.1
1.9
Ostrov Kolychino
2579
-21.3
7.6
-38.1
1.7
Mys Uelen
4471
-18.3
8.0
-36.4
4.6
Tin City
19187
-16.3
7.8
-41.2
5.7
Kotzebue
21788
-19.4
9.2
-44.0
2.9
Cape Lisburne
19270
-18.5
7.8
-36.8
8.4
Point Lay
3348
-24.3
9.4
-46.2
2.3
Barrow
19056
-24.5
7.3
-46.2
-0.5
Lonely
3445
-25.7
8.1
-47.3
-0.5
Oliktok
3322
-25.9
8.8
-45.7
0.1
Barter
17918
-24.5
7.9
-45.1
2.3
Tuktoyaktuk
3201
-24.9
7.3
-43.4
-1.6
Cape Parry
19788
-24.6
6.4
-41.8
-2.7
Clinton Point
4547
-26.2
6.8
-42.9
-3.2
Holman
3221
-23.0
6.5
-39.5
0.1
%
N
NE
E
SE
S
SW
W
NW
C
MEAN
AIR TEMPERATURE (°C)



8 Air Temperature Mean and Frequency ≦0°C

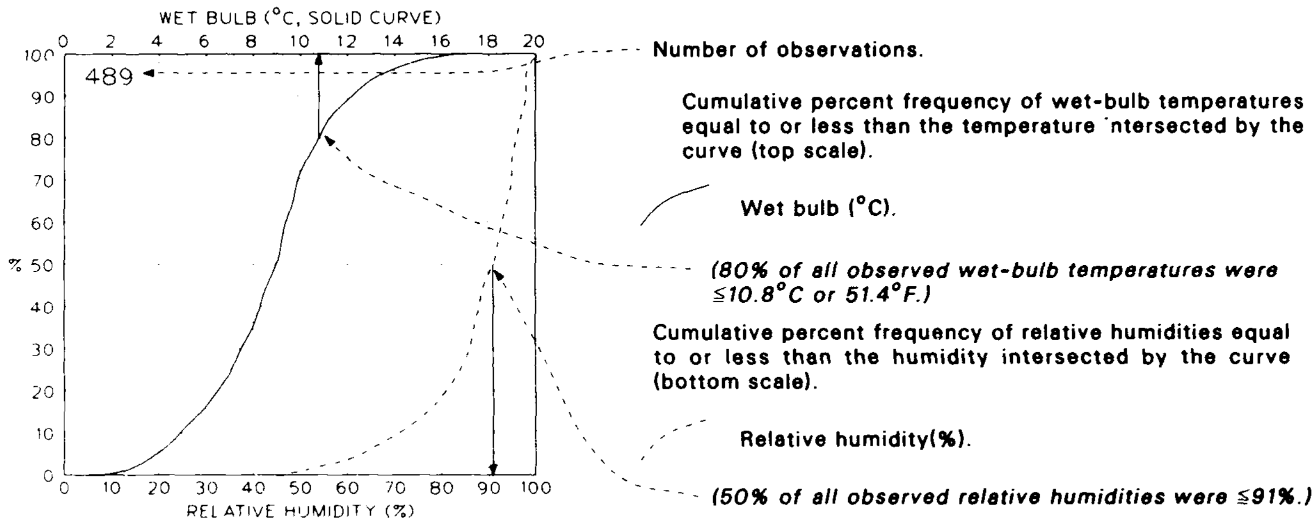
Map 9. Dew point temperature extremes (°C)

BLACK LINE – Maximum (99%) dew point temperature (1% of temperatures were greater than the given value).

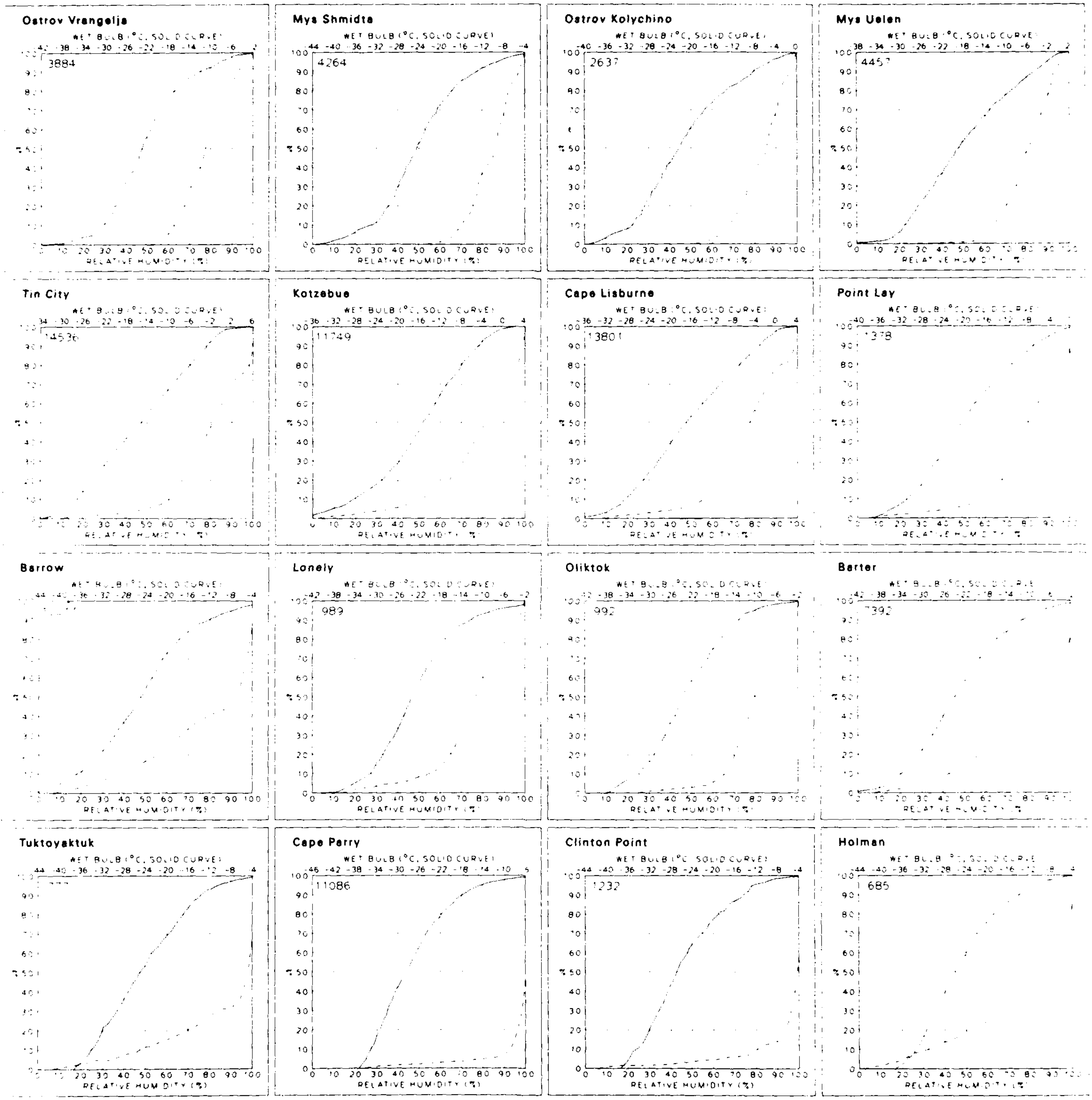
BLUE LINE – Minimum (1%) dew point temperature (1% of temperatures were equal to or less than the given value).

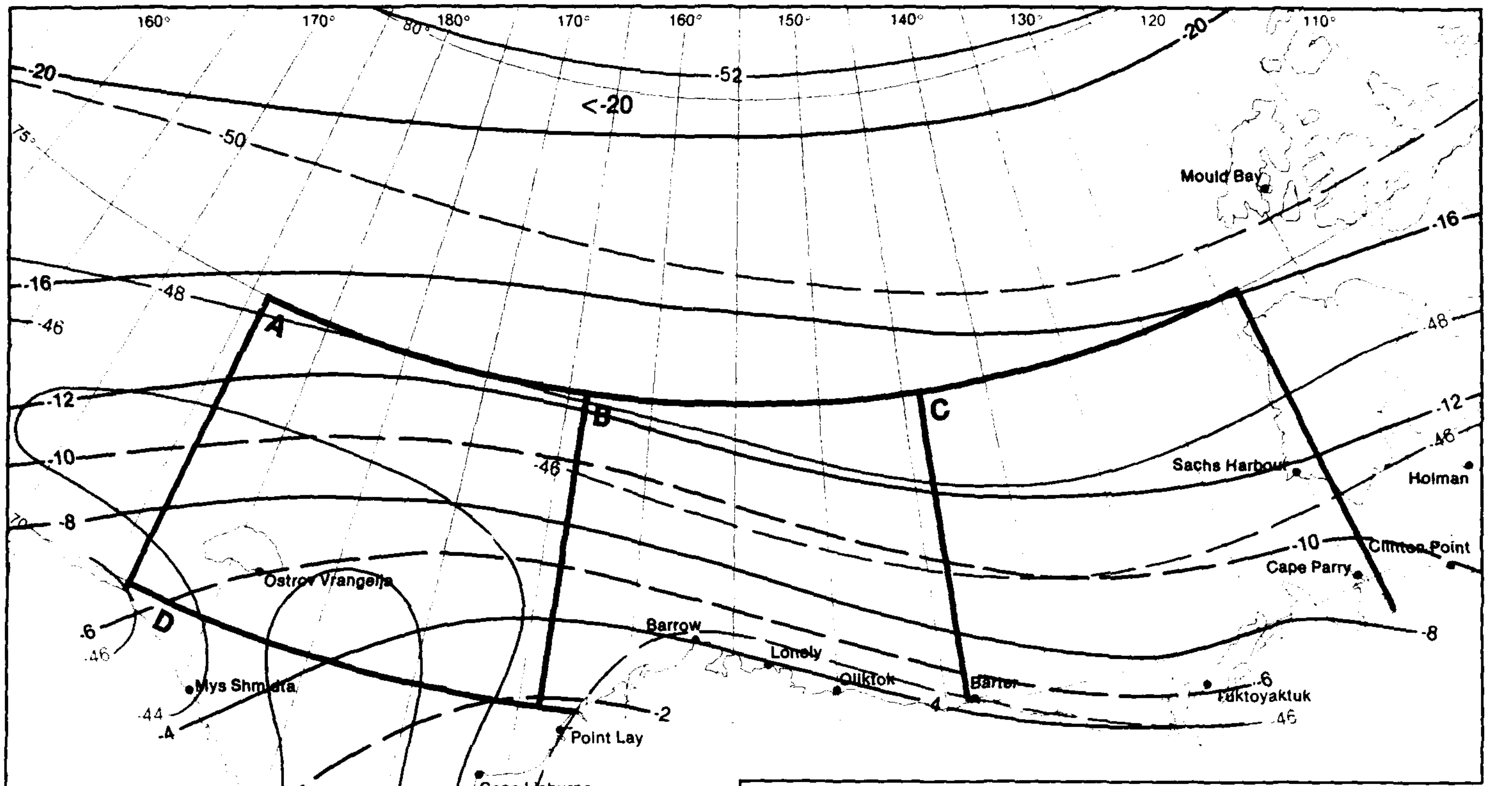
Albers Equal–Area Conic Projection

Graphs: Wet bulb/relative humidity

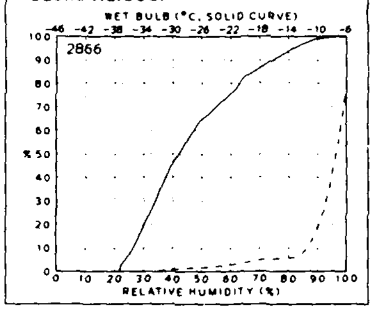


The observation count for the graph reflects those observations containing both dry and wet bulb temperatures; both are required in computing the relative humidity. The percentage of observations of either element greater than a given value can be obtained from the graph by subtracting the cumulative percent frequency of that value from 100%.

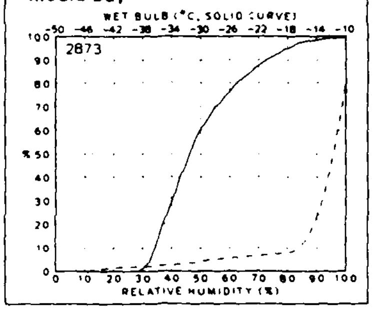

Ostrov Vrangelja
3884
Mys Shmidta
4264
Ostrov Kolychino
2637
Mys Uelen
Tin City
14536
Kotzebue
11749
Cape Lisburne
13801
Point Lay
Barrow
Lonely
989
Oliktok
992
Barter
Tuktoyaktuk
Cape Parry
11086
Clinton Point
1232
Holman
685
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)
%



Sachs Harbour



Mould Bay



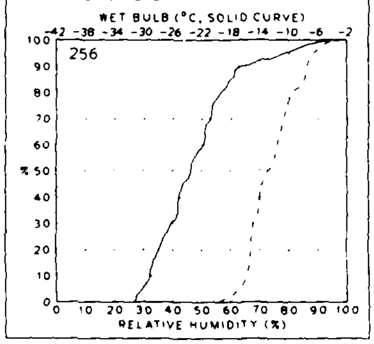
Marine Area A

No Data Available

Marine Area B

No Data Available

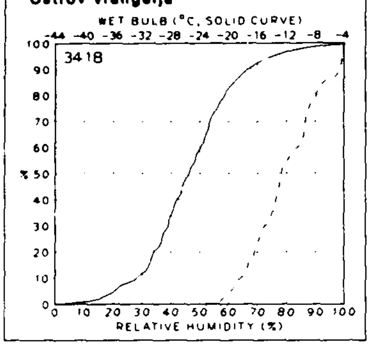
Marine Area C



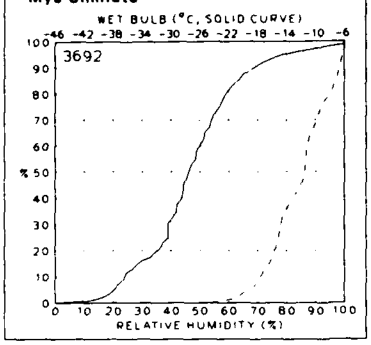
Marine Area D

No Data Available

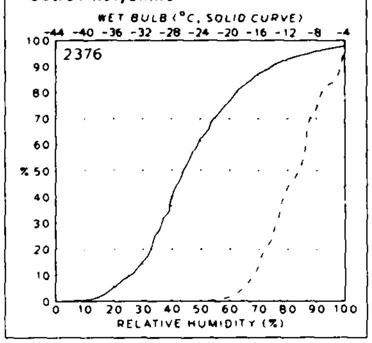
Ostrov Vrangelja



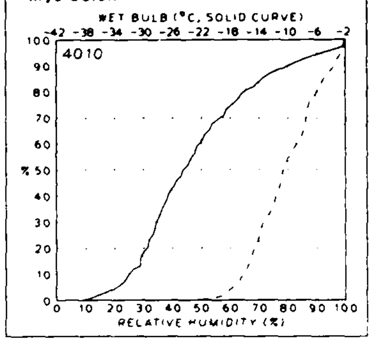
Mys Shmidta



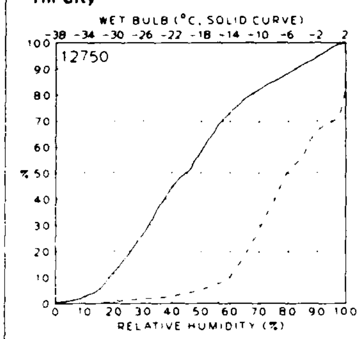
Ostrov Kolychino



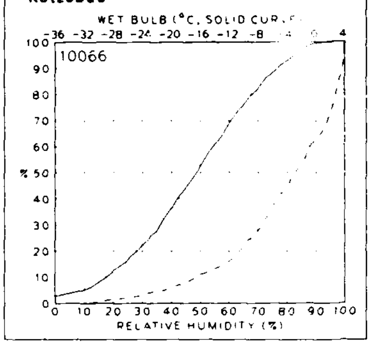
Mys Uelen



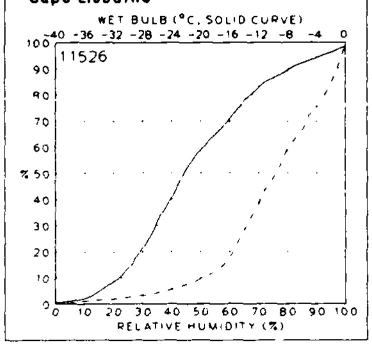
Tin City



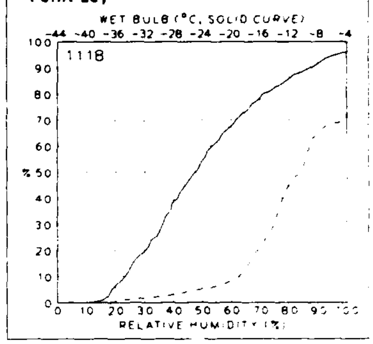
Kotzebue



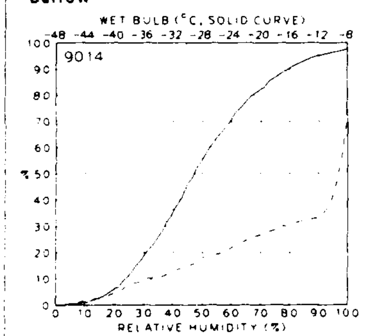
Cape Lisburne



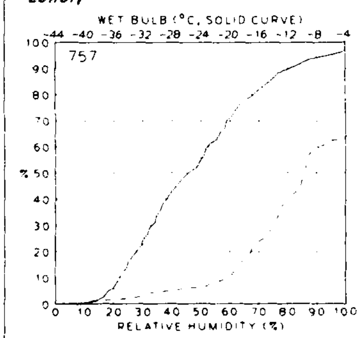
Point Lay



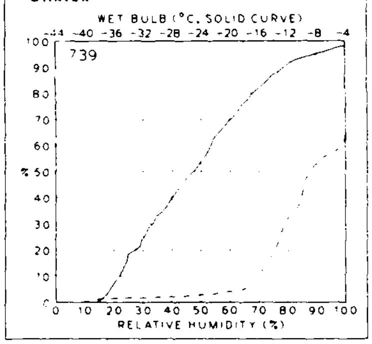
Barrow



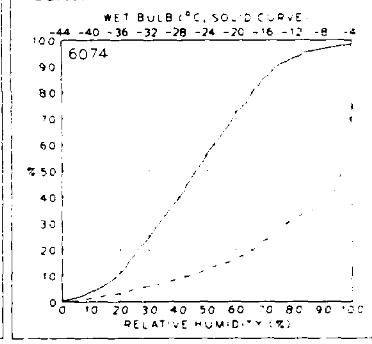
Lonely



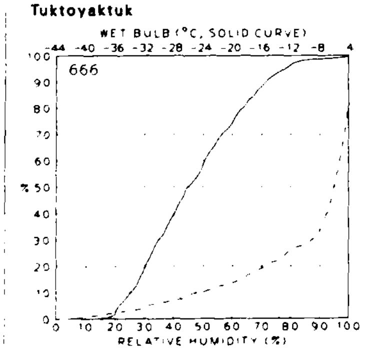
Oliktok



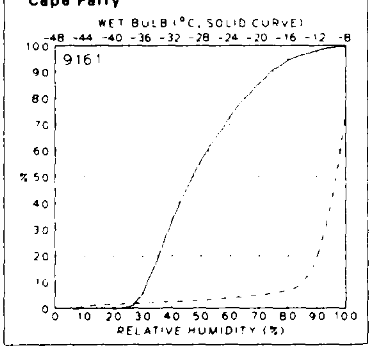
Barter



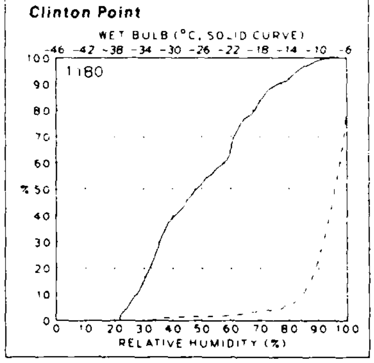
Tuktoyaktuk



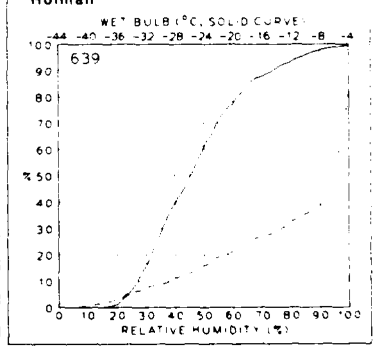
Cape Parry

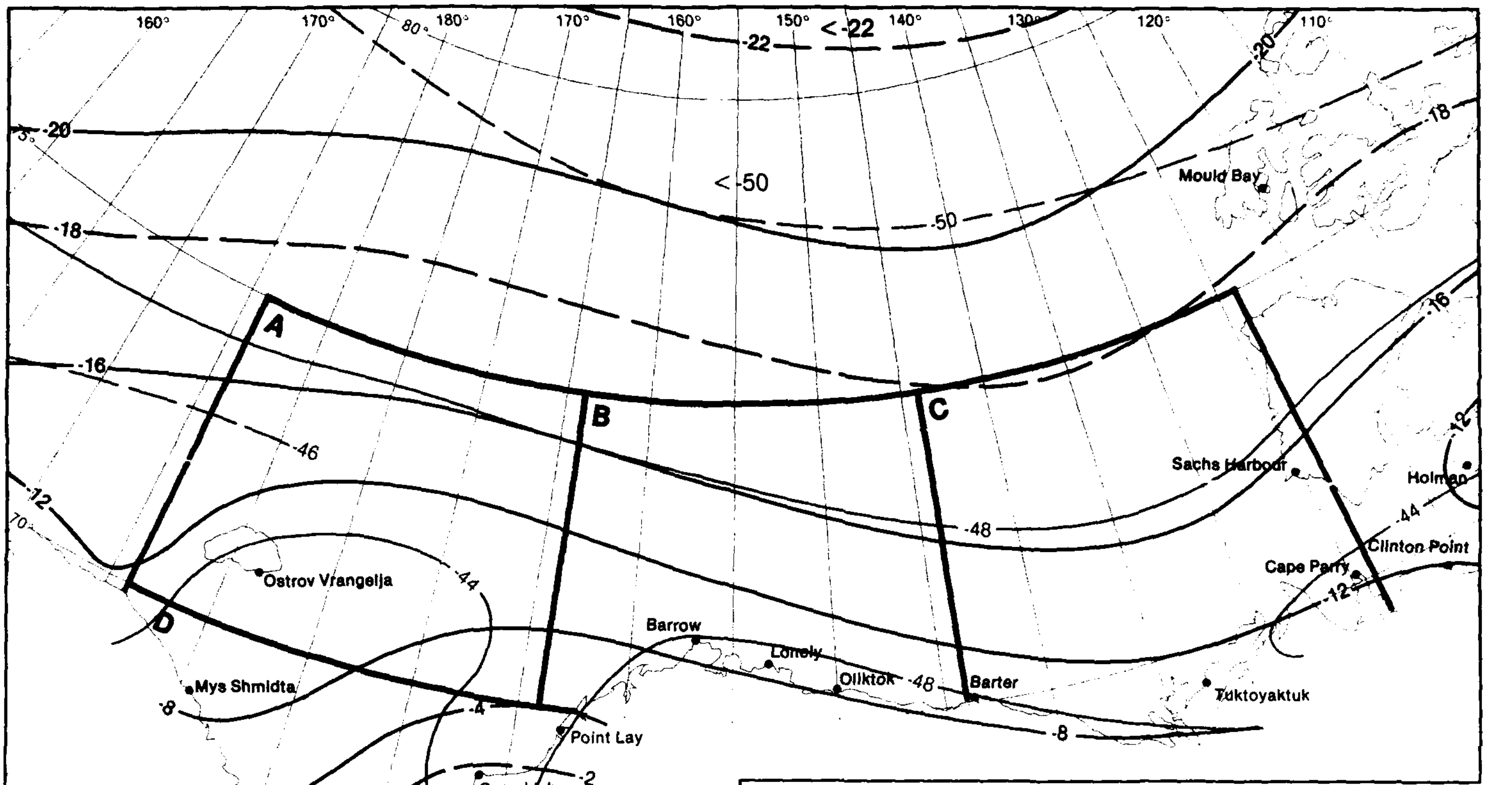


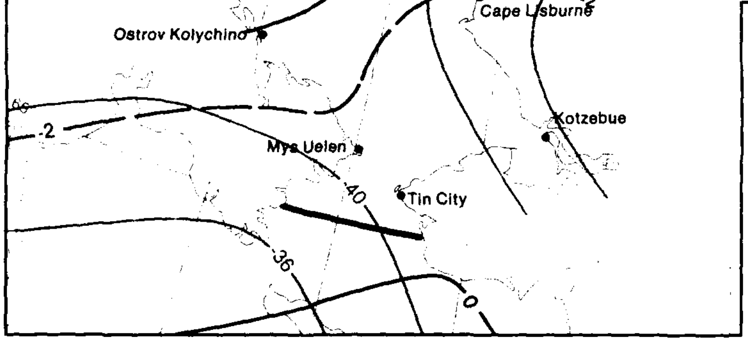
Clinton Point

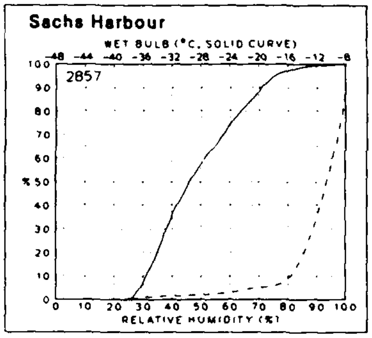


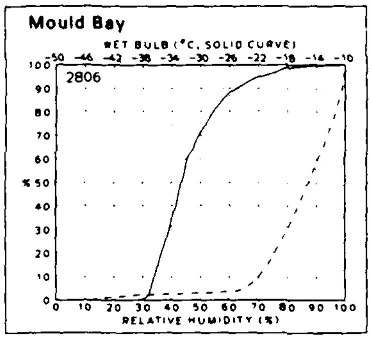
Holman





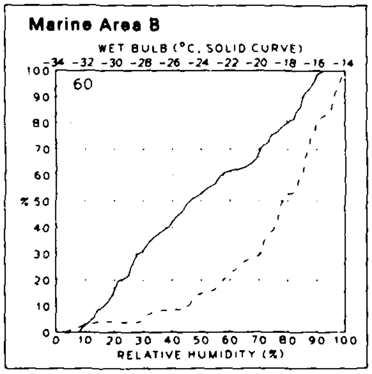


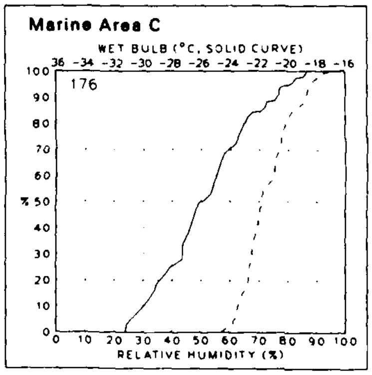


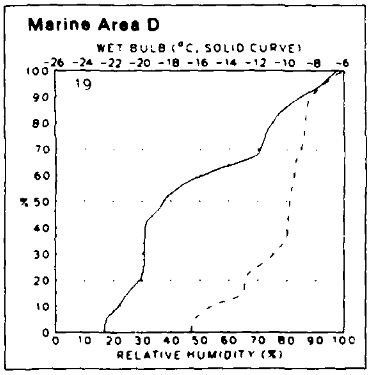


Marine Area A

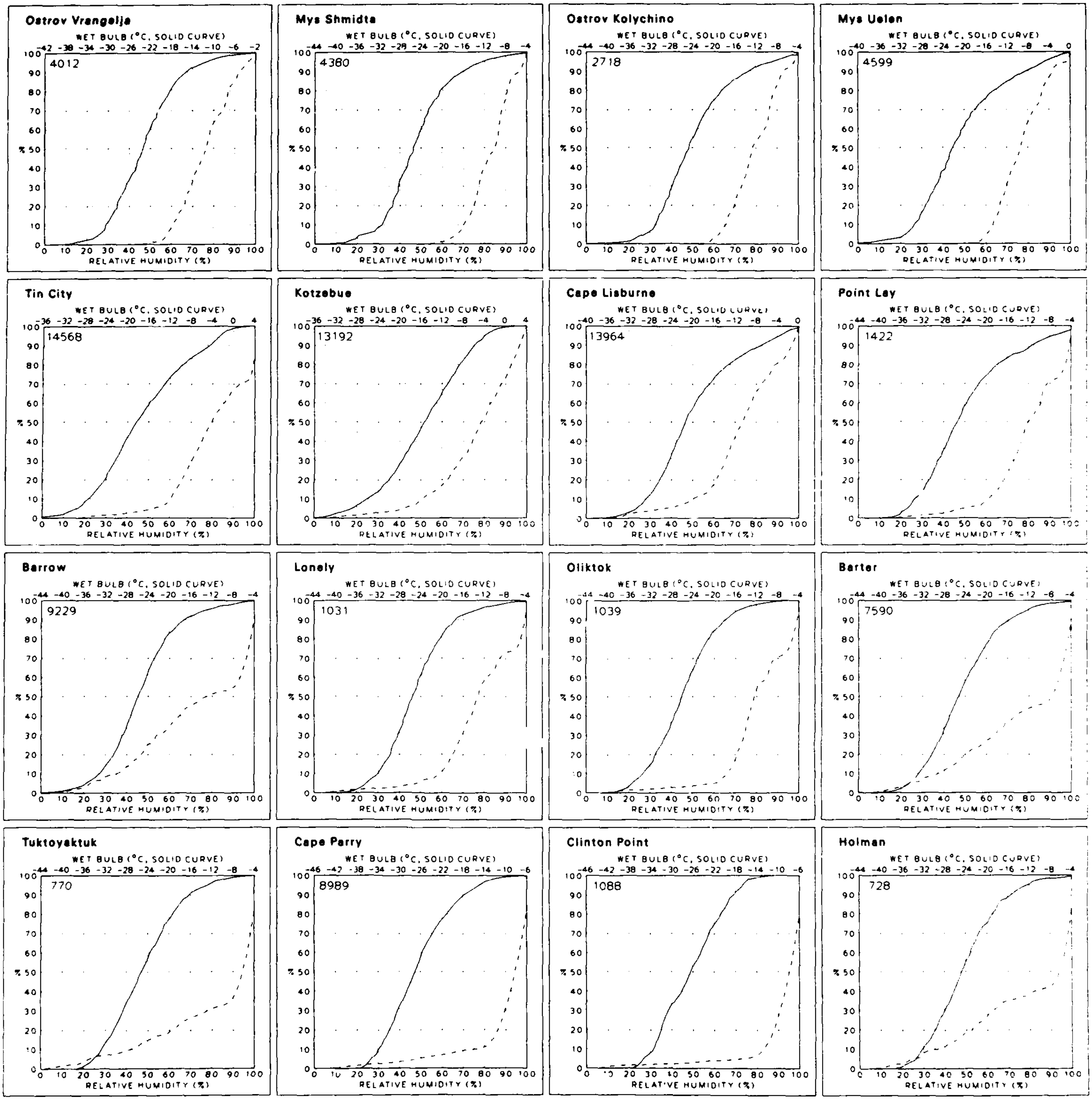
No Data Available



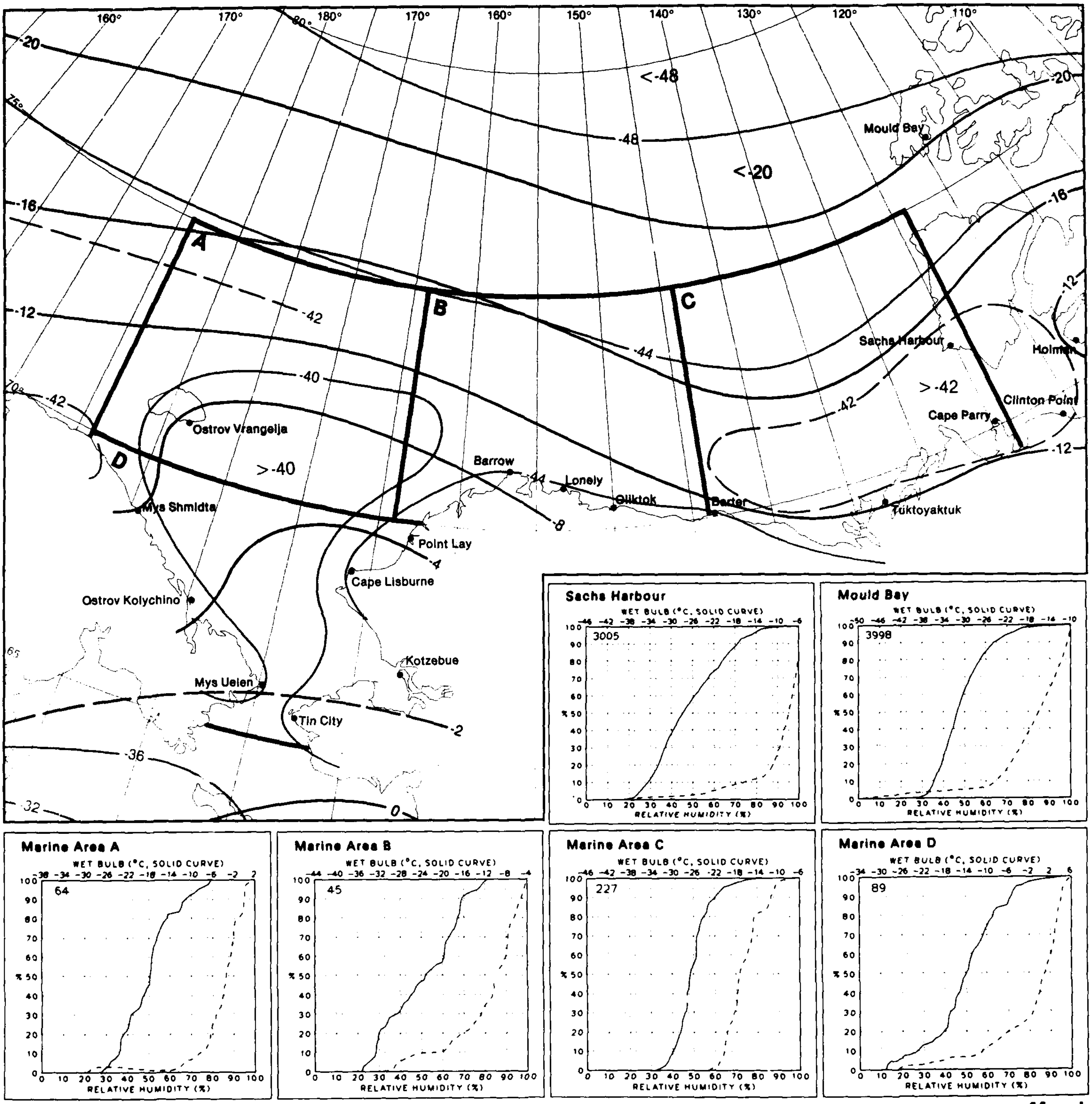




9 Dew Point Temperature Extremes **February**

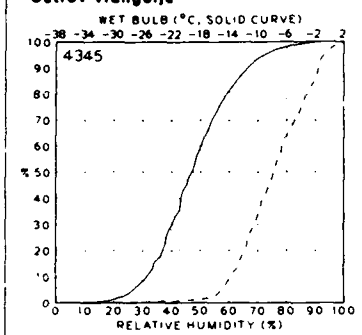


9 Wet Bulb and Relative Humidity

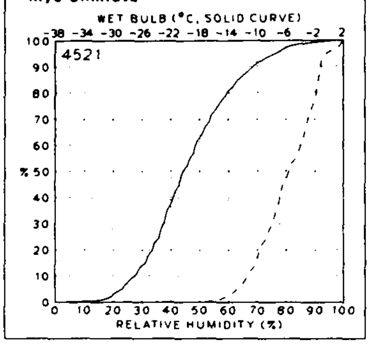


9 Dew Point Temperature Extremes **March**

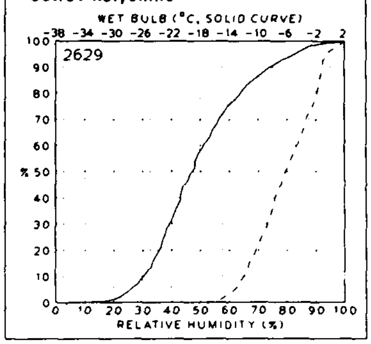
Ostrov Vrangelja



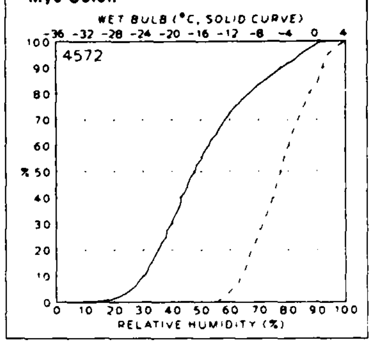
Mys Shmidta



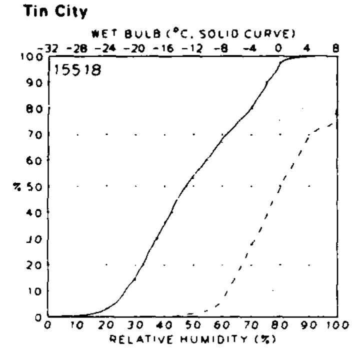
Ostrov Kolychino



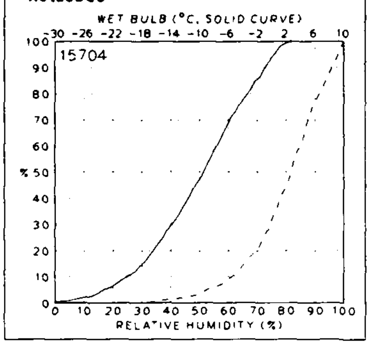
Mys Uelen



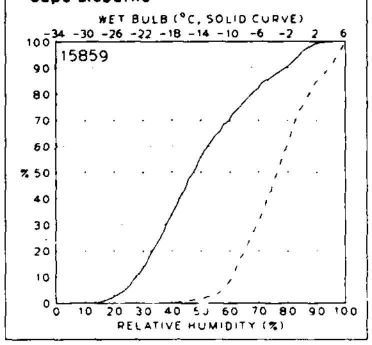
Tin City



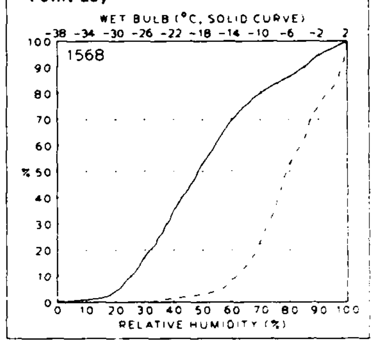
Kotzebue



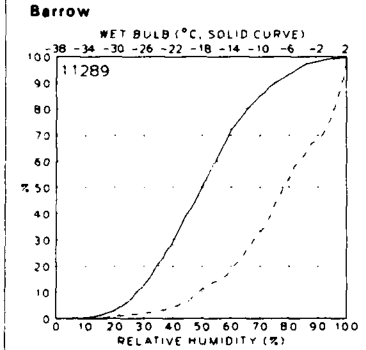
Cape Lisburne



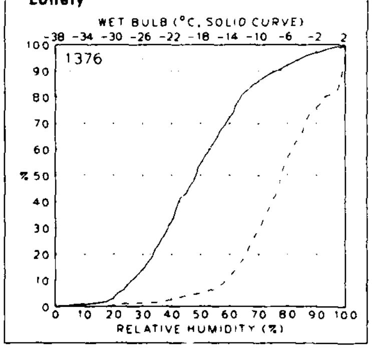
Point Lay



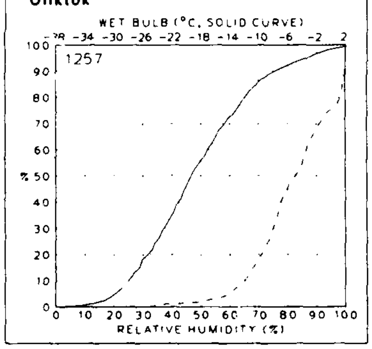
Barrow



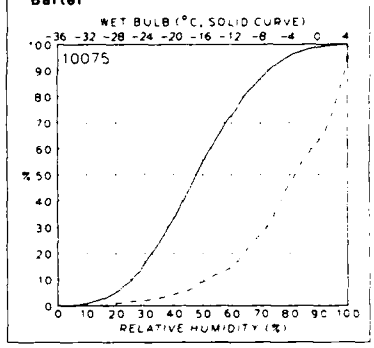
Lonely



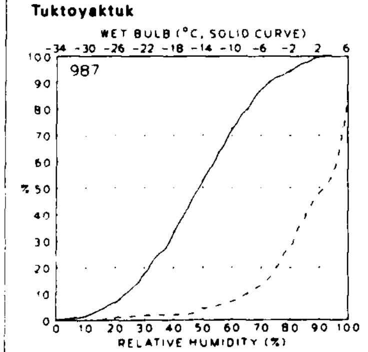
Oliktok



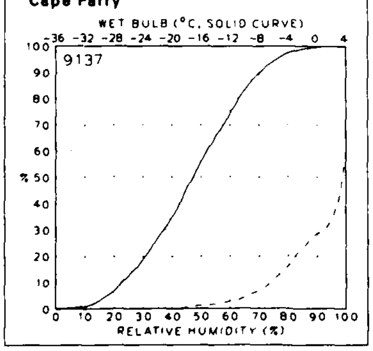
Barter



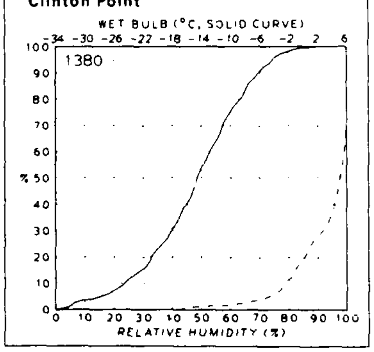
Tuktoyaktuk



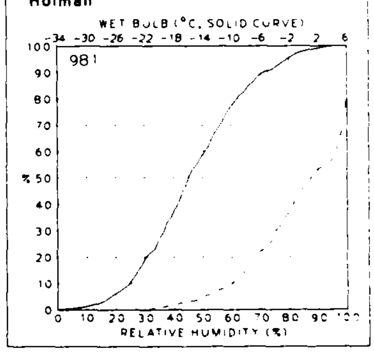
Cape Parry

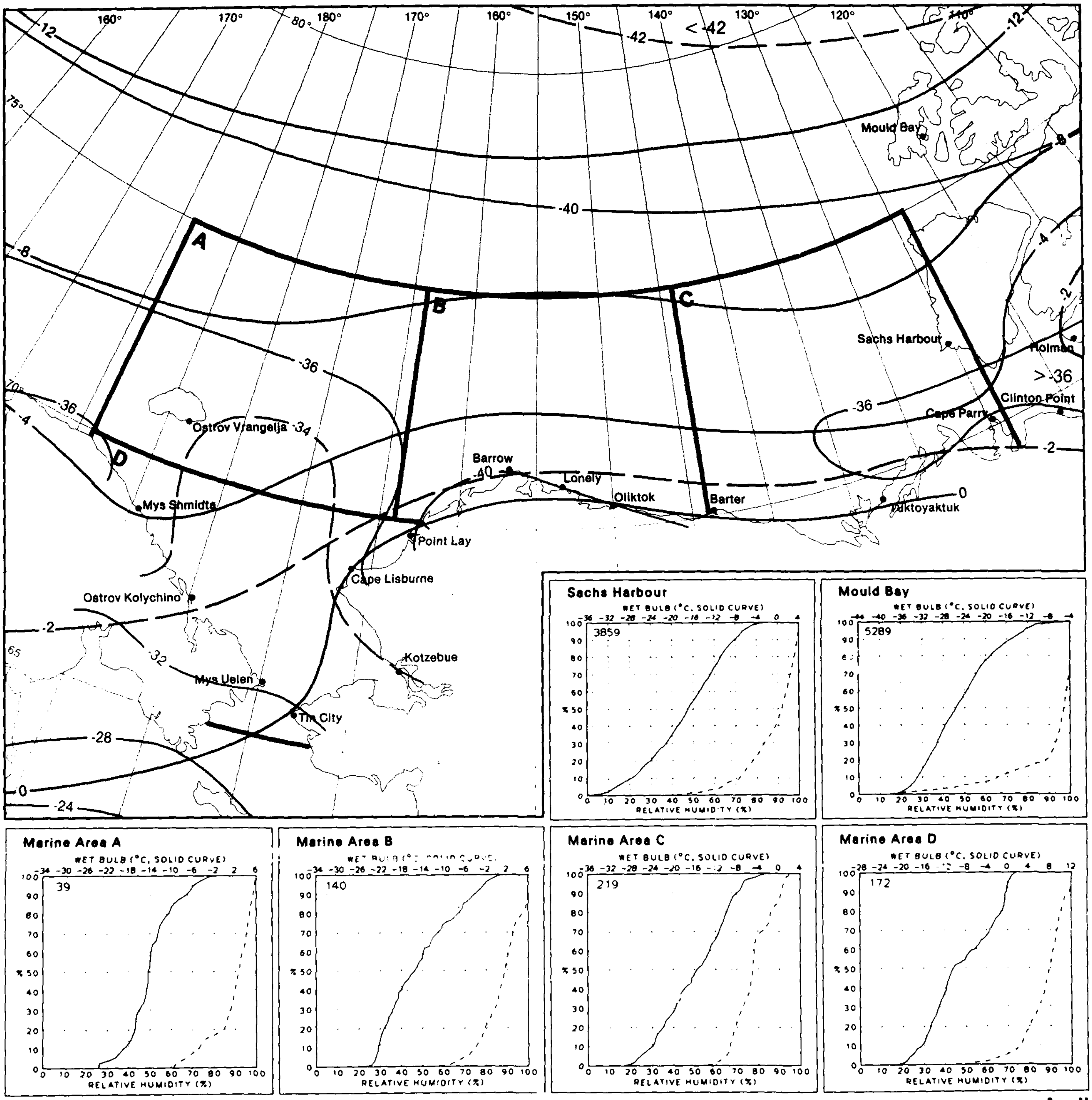


Clinton Point



Holman

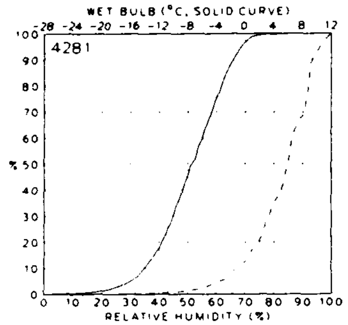




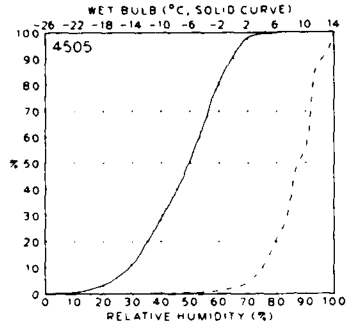
9 Dew Point Temperature Extremes

April

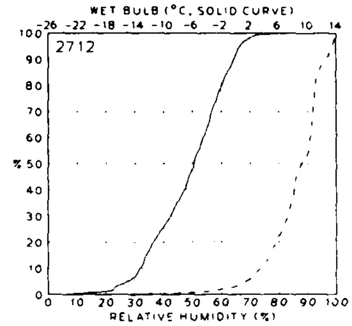
Ostrov Vrangelja



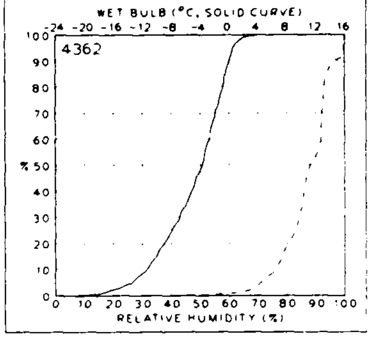
Mys Shmidta



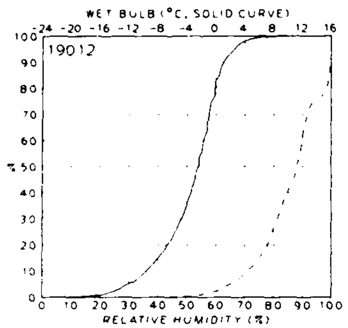
Ostrov Kolychino



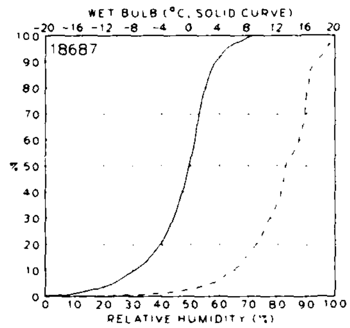
Mys Uelen



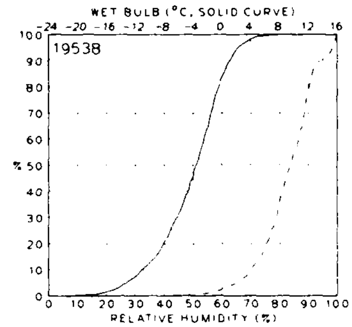
Tin City



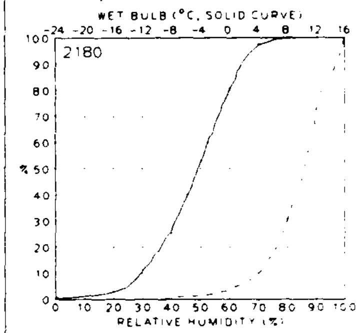
Kotzebue



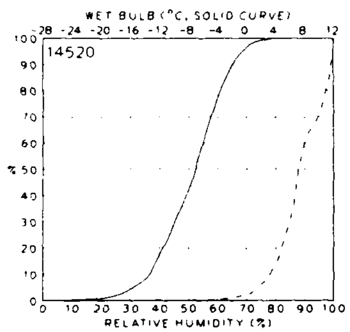
Cape Lisburne



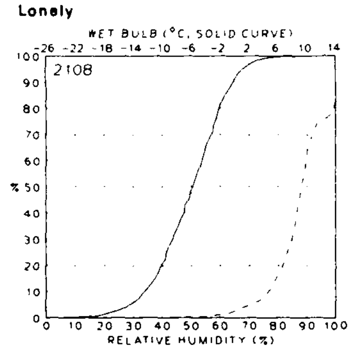
Point Lay



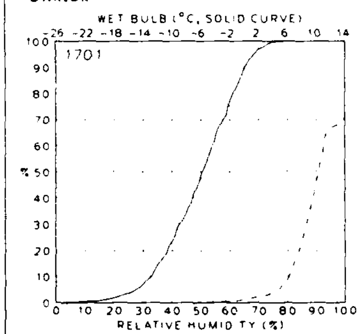
Barrow



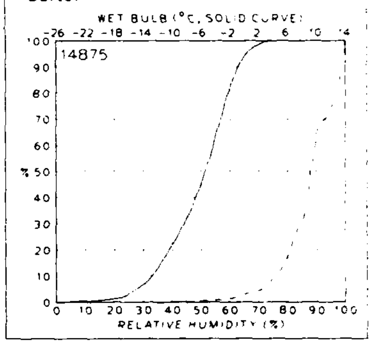
Lonely



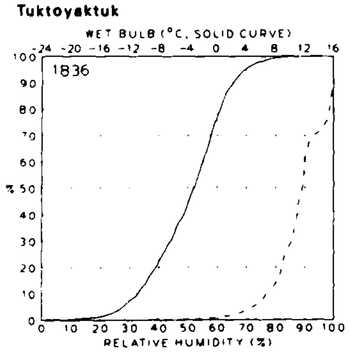
Oliktok



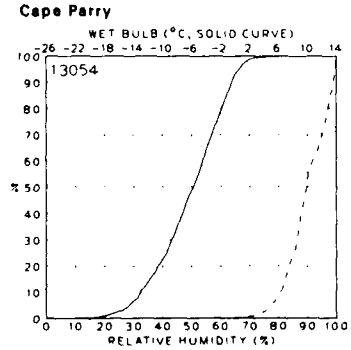
Barter



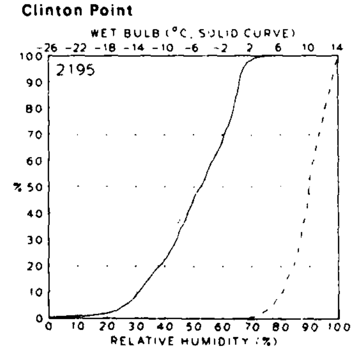
Tuktoyaktuk



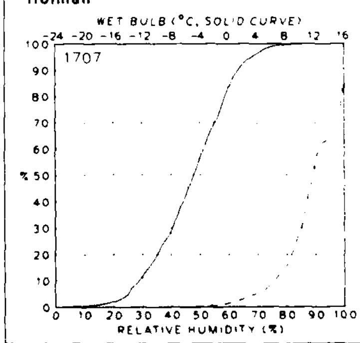
Cape Parry

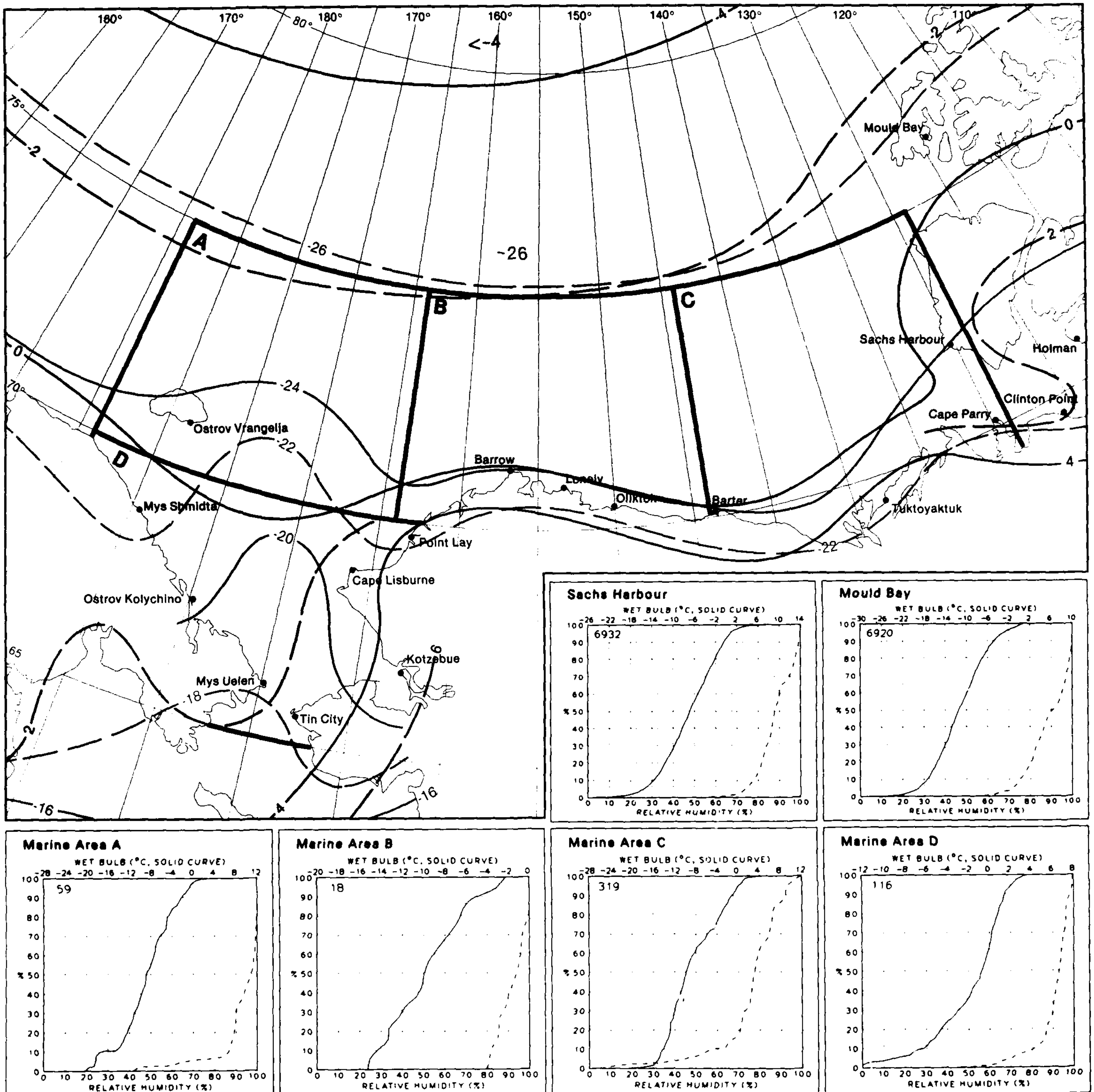


Clinton Point

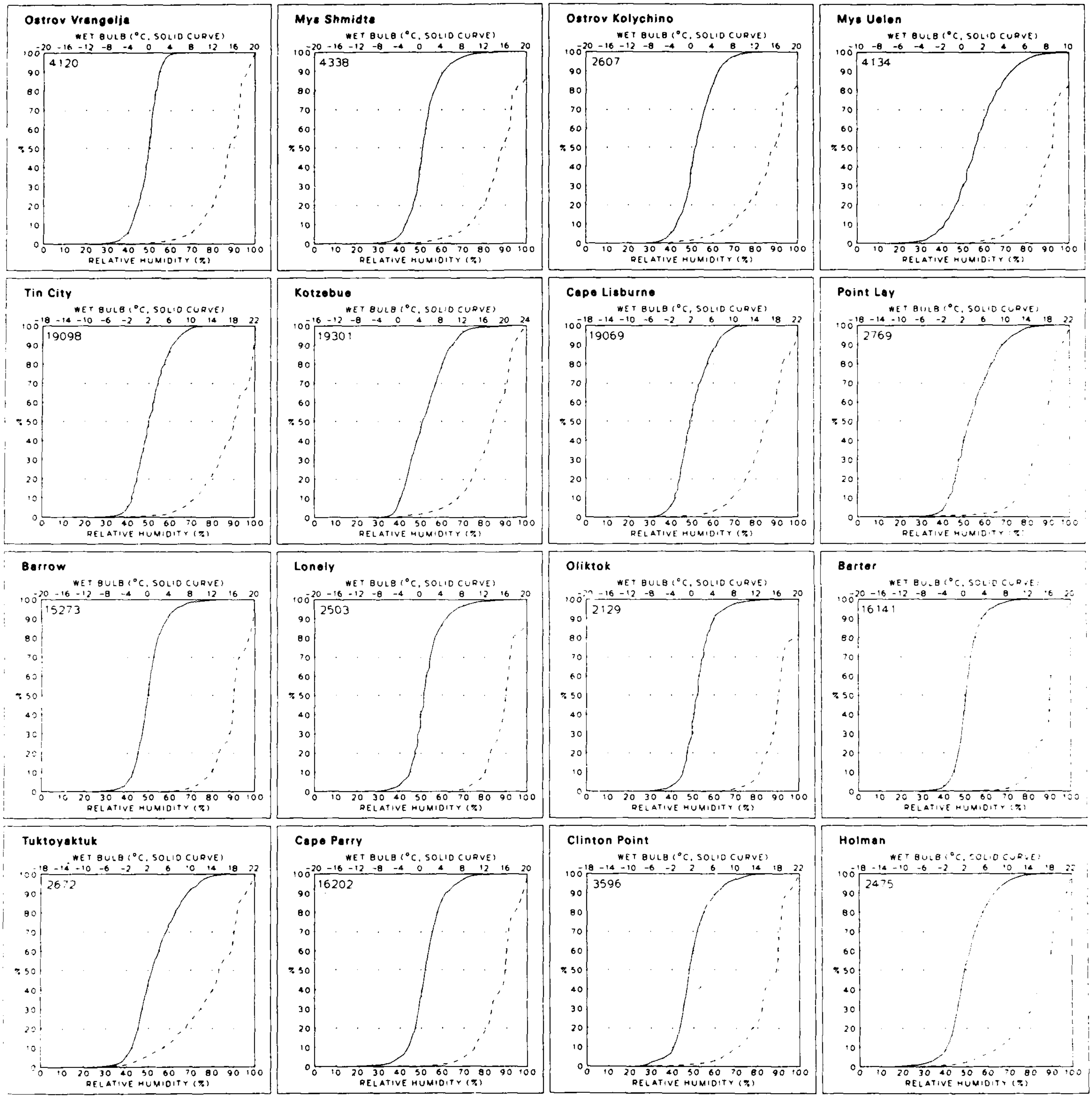


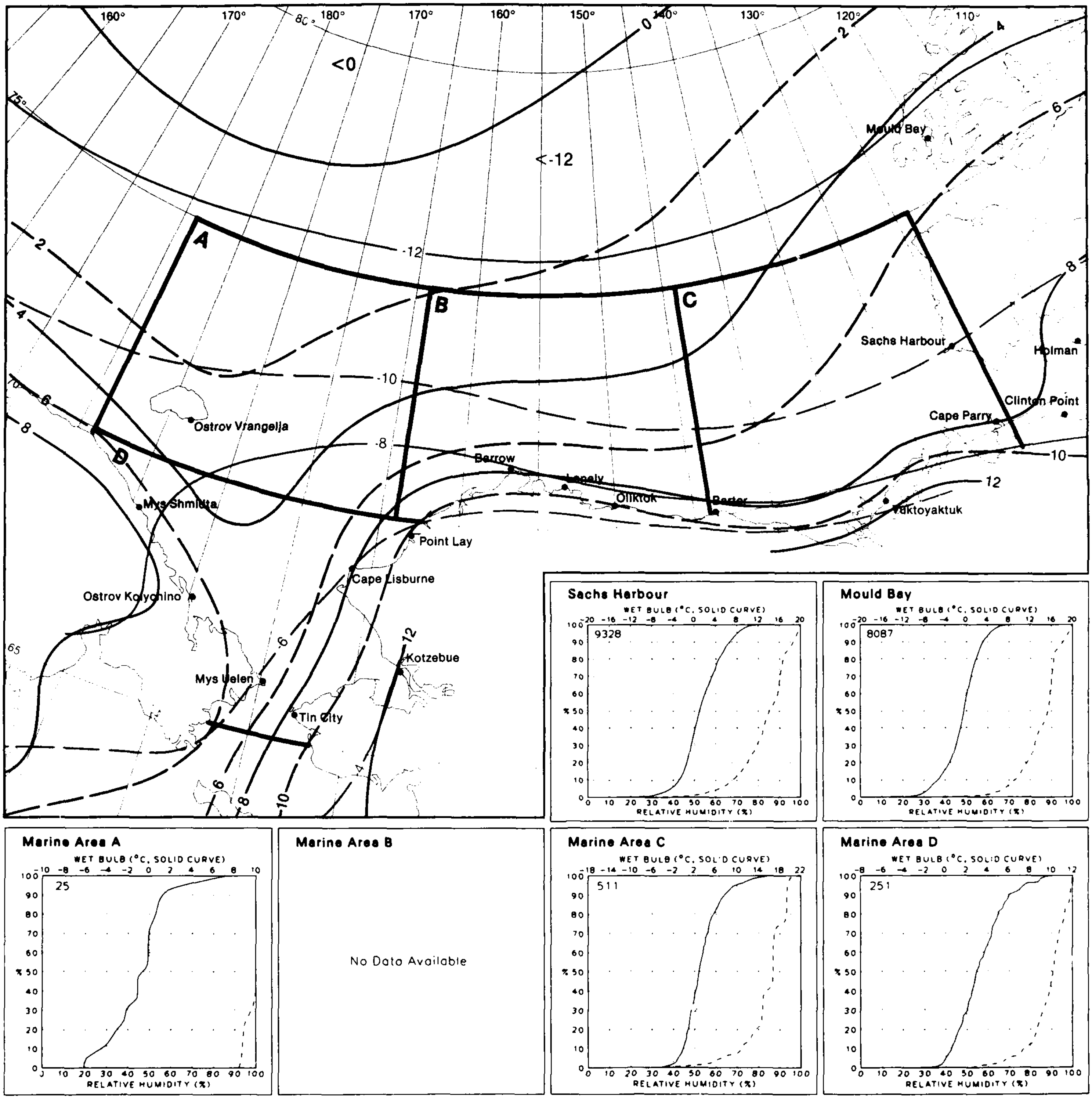
Holman





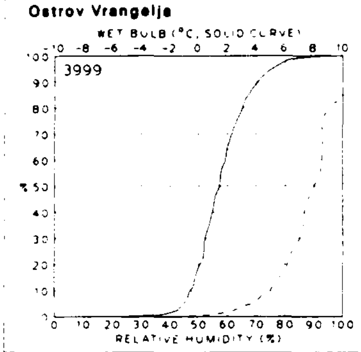
9 Dew Point Temperature Extremes


Ostrov Vrangelja
4120
Mys Shmidta
4338
Ostrov Kolychino
2607
Mys Uelen
4134
Tin City
19098
Kotzebue
19301
Cape Lisburne
19069
Point Lay
2769
Barrow
15273
Lonely
2503
Oliktok
2129
Barter
16141
Tuktoyaktuk
2672
Cape Parry
16202
Clinton Point
3596
Holman
2475
WET BULB (°C, SOLID CURVE)
%
RELATIVE HUMIDITY (%)

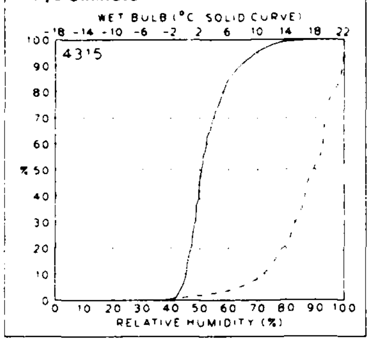


9 Dew Point Temperature Extremes **June**

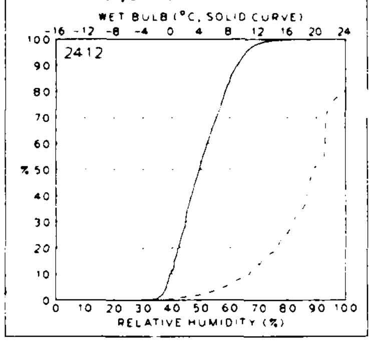
Ostrov Vrangelja



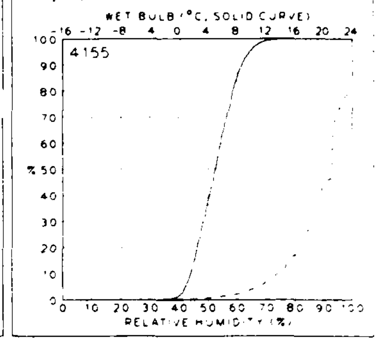
Mys Shmidta



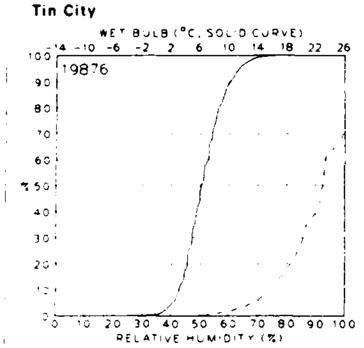
Ostrov Kolychino



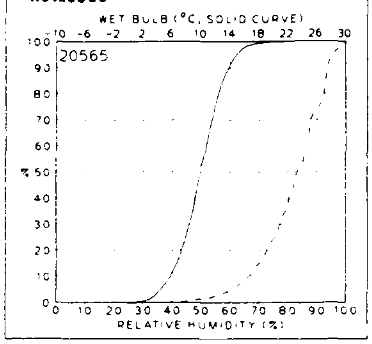
Mys Uelen



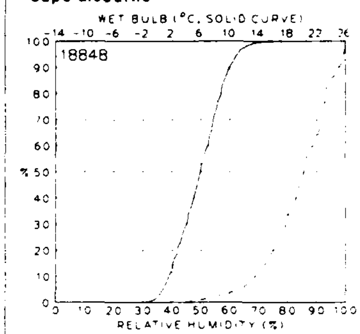
Tin City



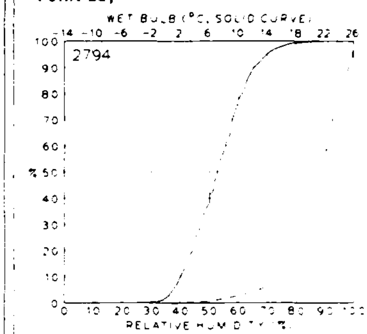
Kotzebue



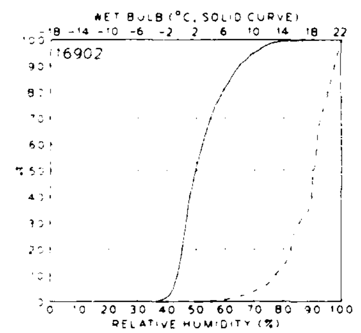
Cape Lisburne



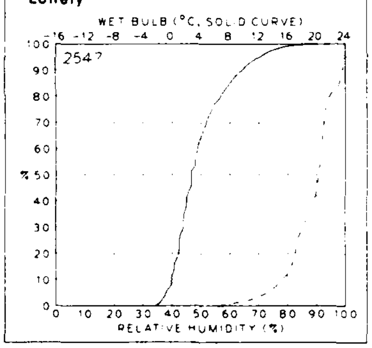
Point Lay



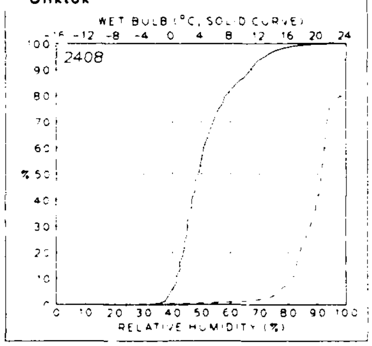
Barrow



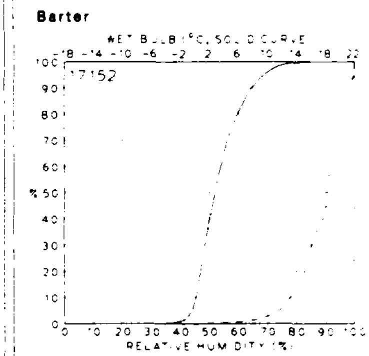
Lonely



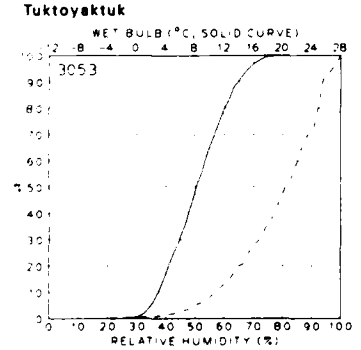
Oliktok



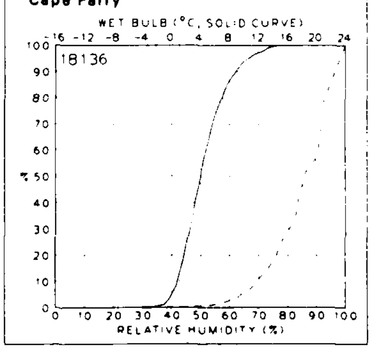
Barter



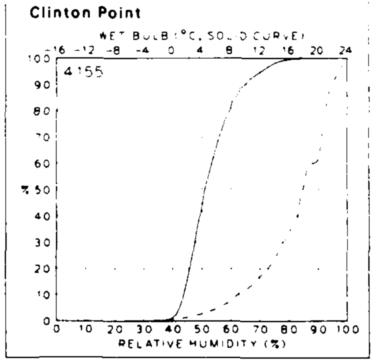
Tuktoyaktuk



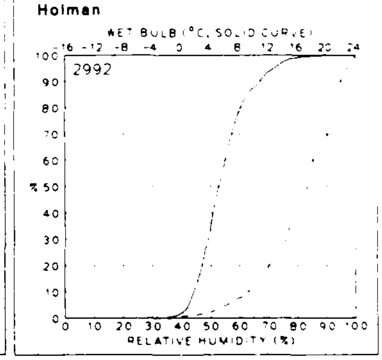
Cape Parry

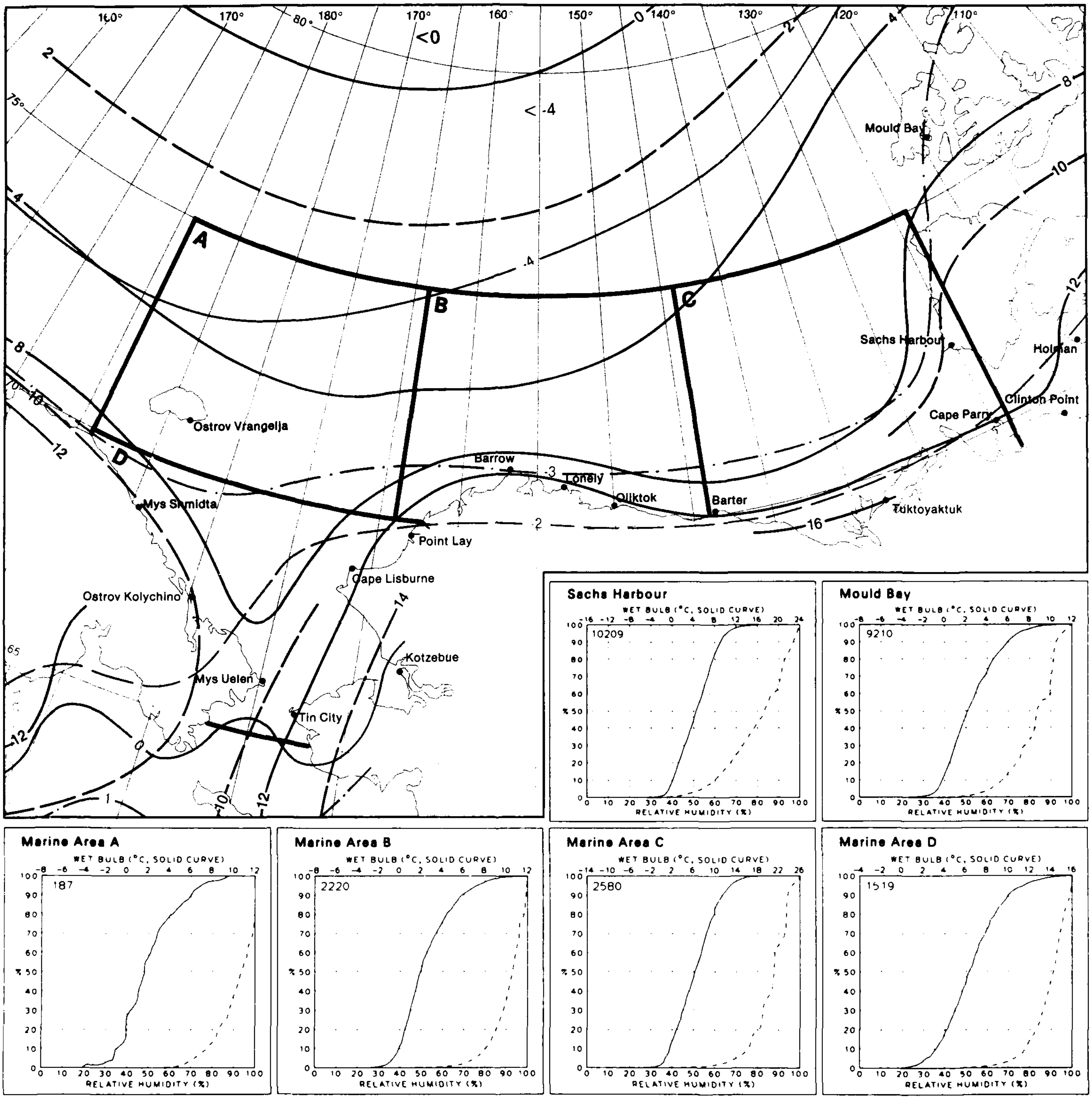


Clinton Point



Holman

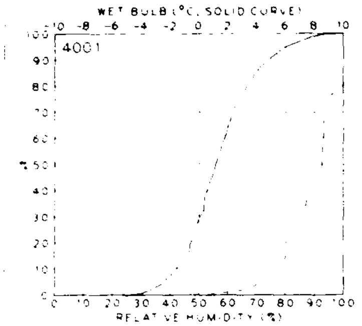




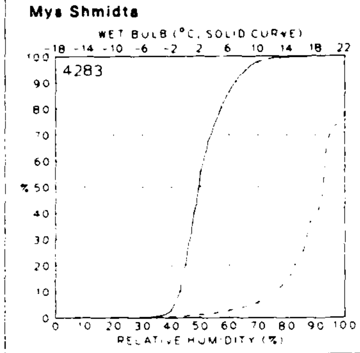
9 Dew Point Temperature Extremes

July

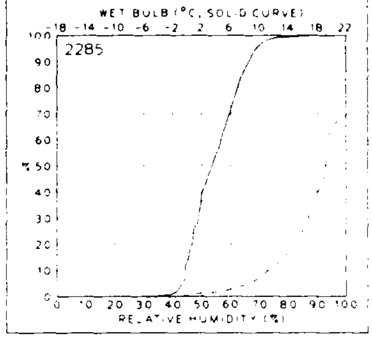
Ostrov Vrangelja



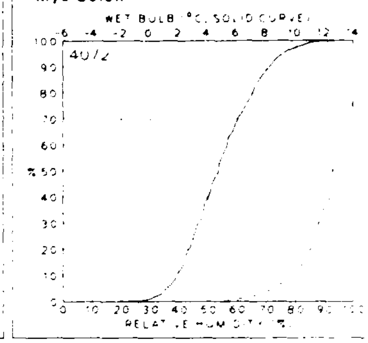
Mys Shmidta



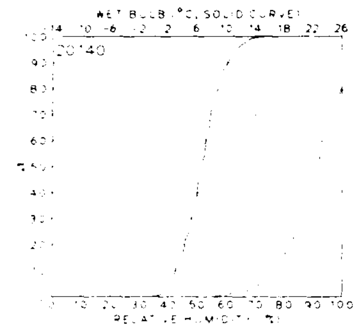
Ostrov Kolychino



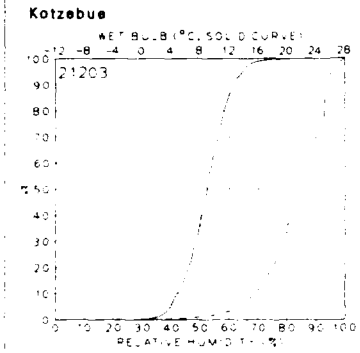
Mys Uelen



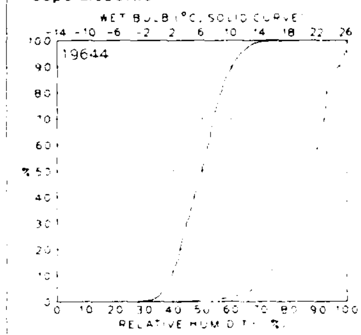
Tin City



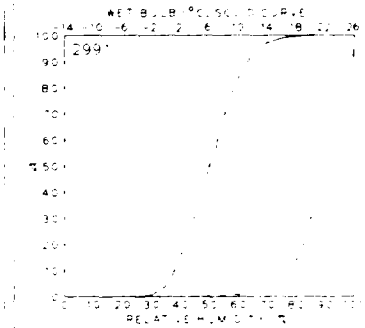
Kotzebue



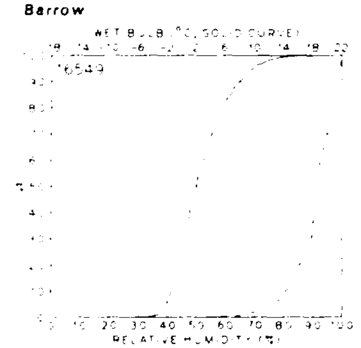
Cape Lisburne



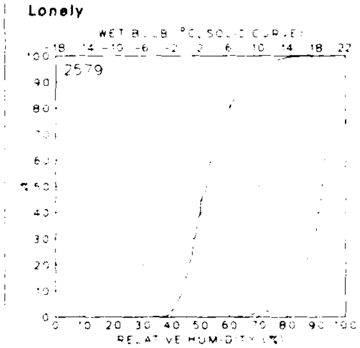
Point Lay



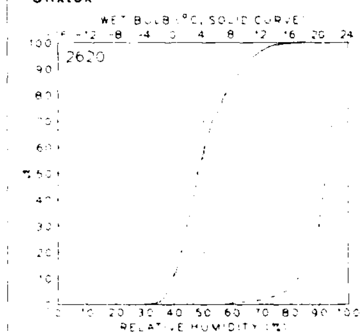
Barrow



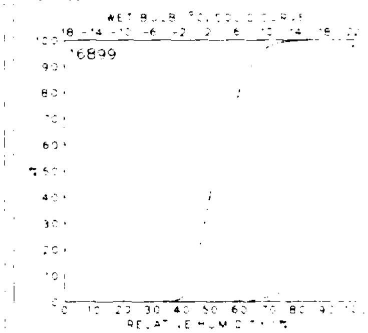
Lonely



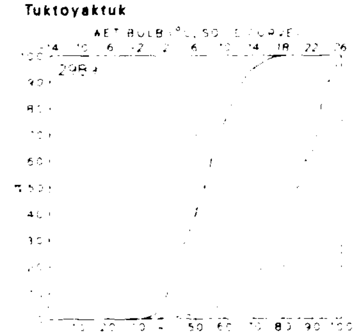
Oliktok



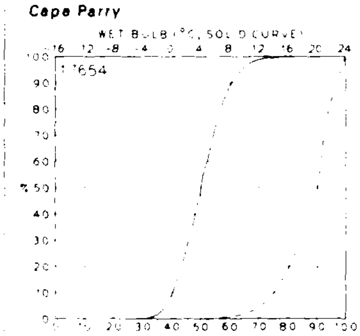
Barter



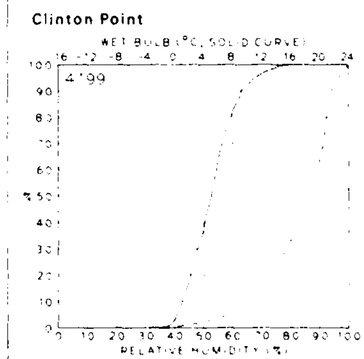
Tuktoyaktuk



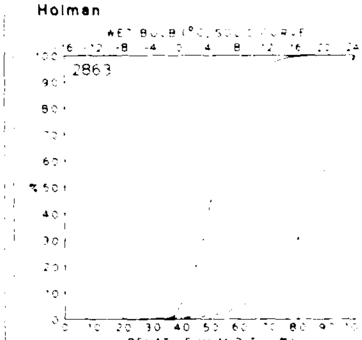
Cape Parry

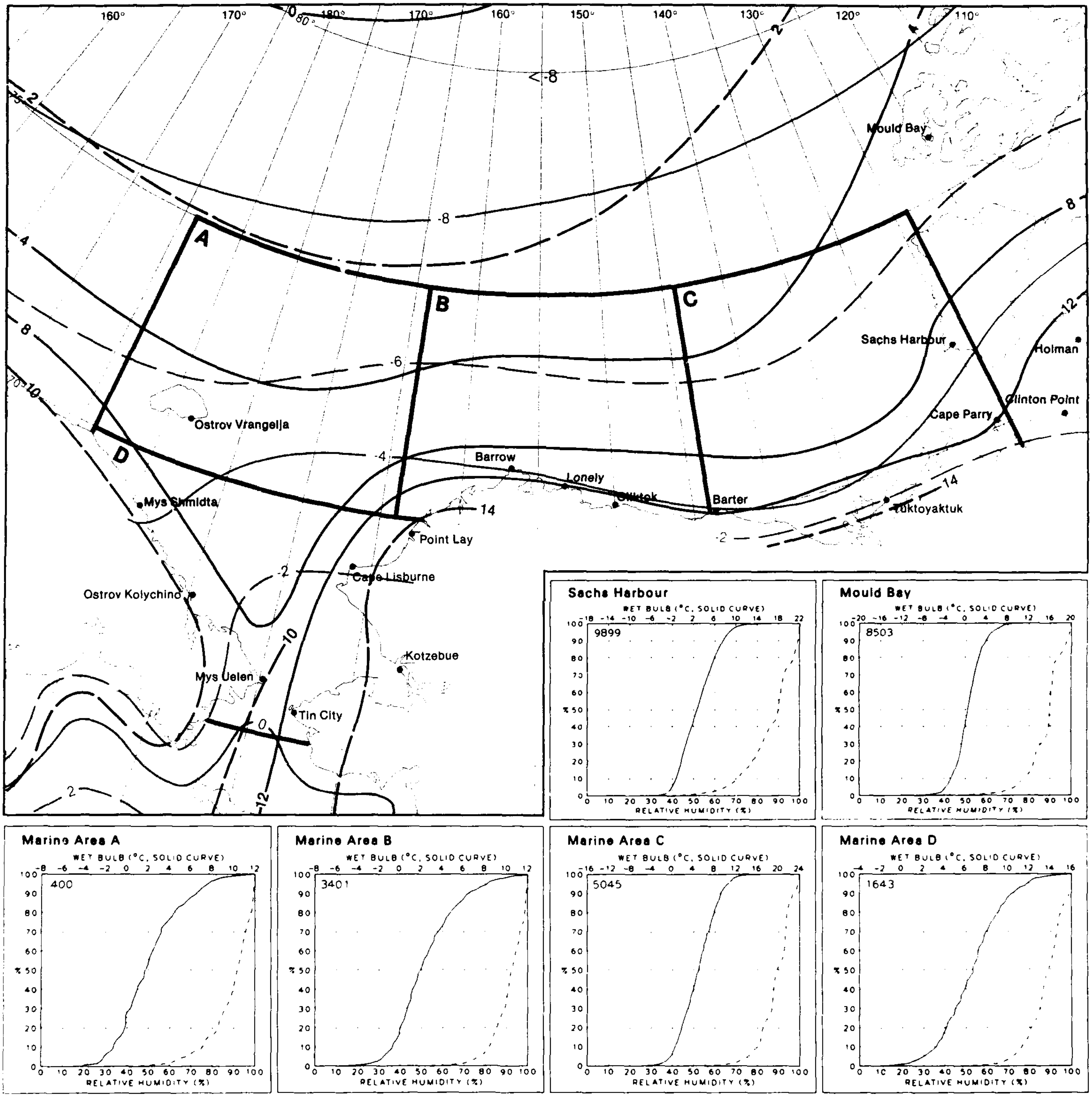


Clinton Point



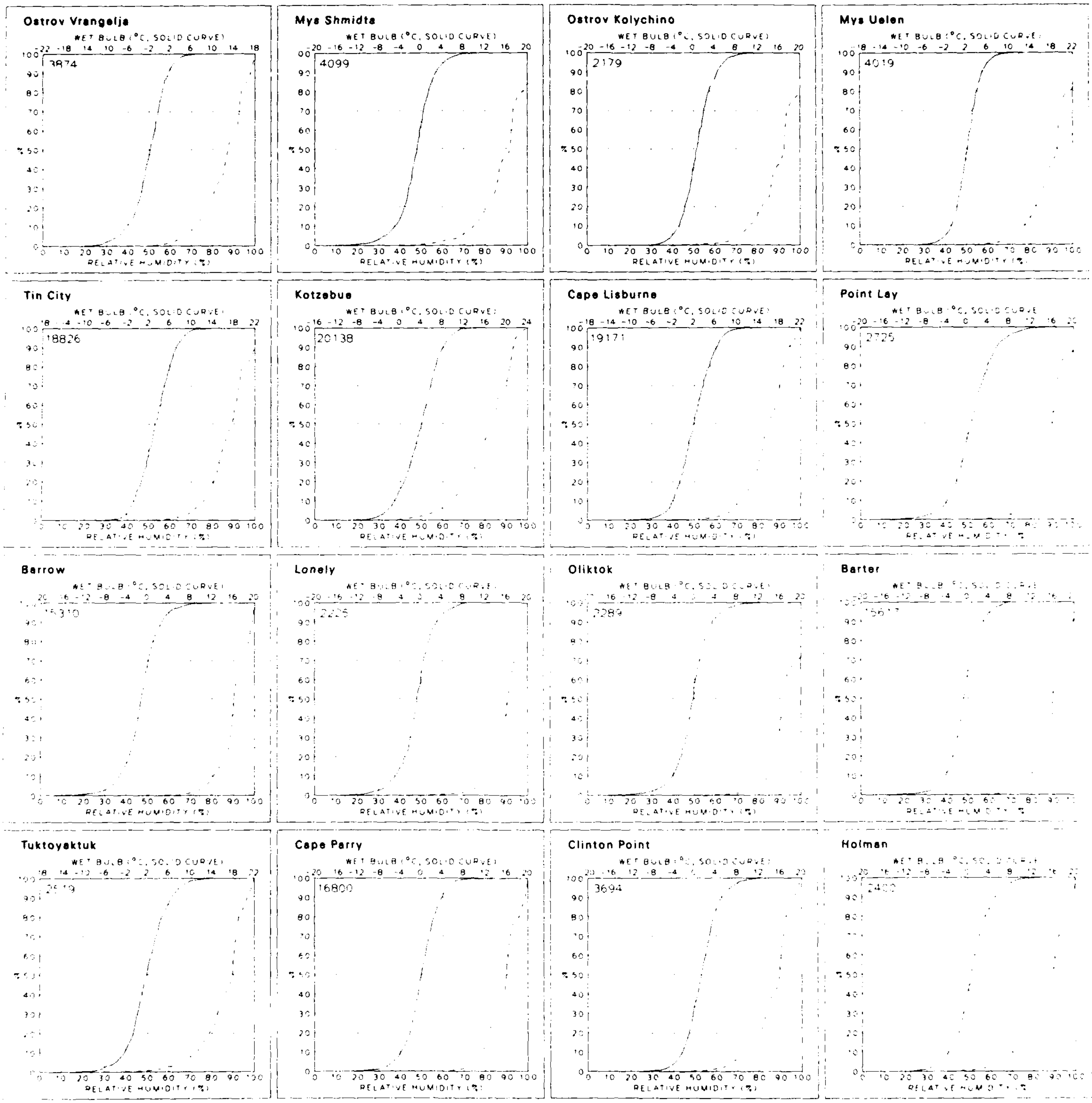
Holman





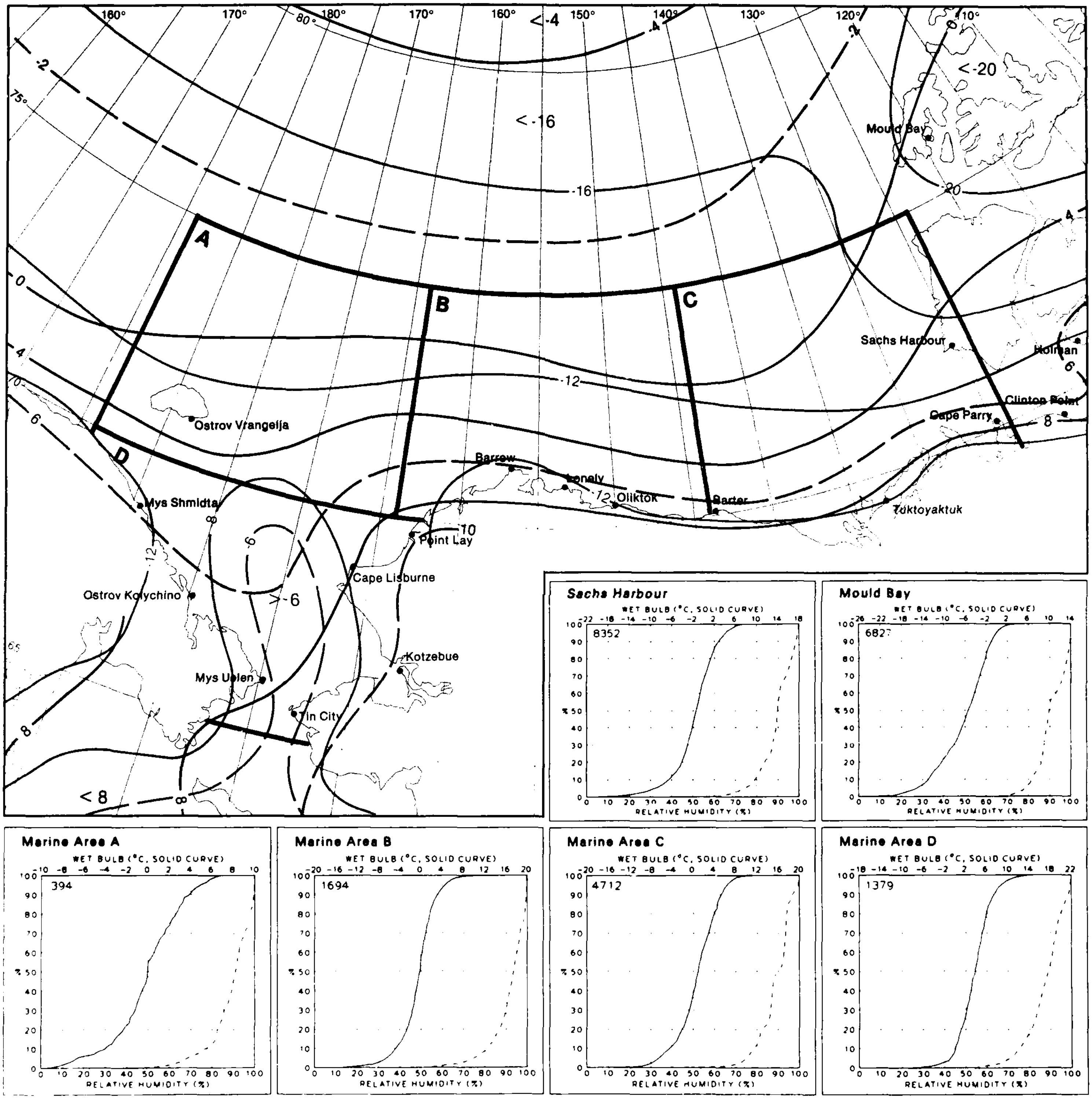
9 Dew Point Temperature Extremes

August



September

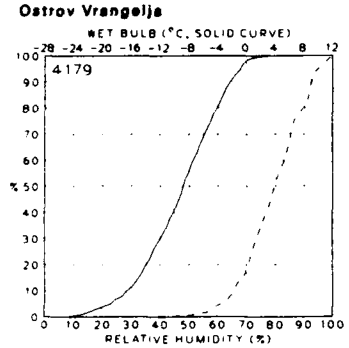
9 Wet Bulb and Relative Humidity



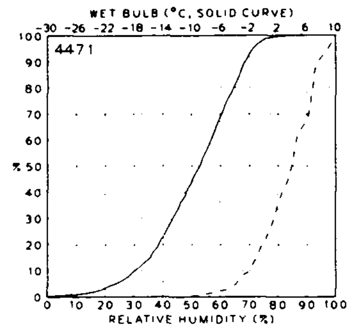
9 Dew Point Temperature Extremes

September

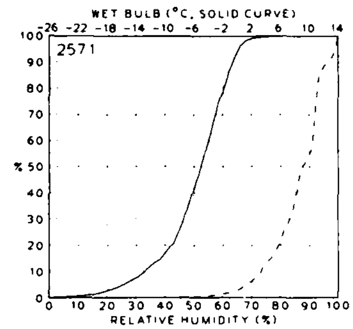
Ostrov Vrangelja



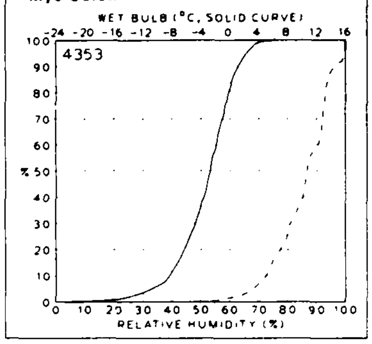
Mys Shmidta



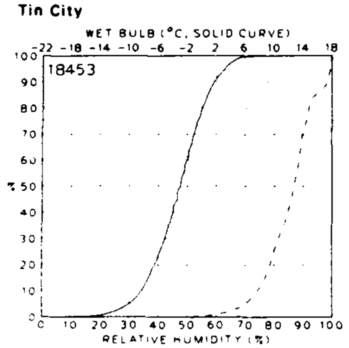
Ostrov Kolychino



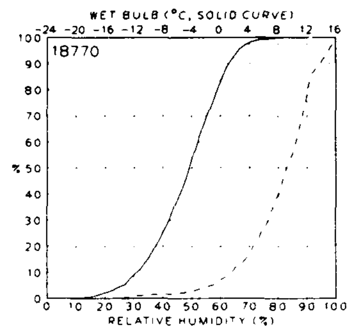
Mys Uelen



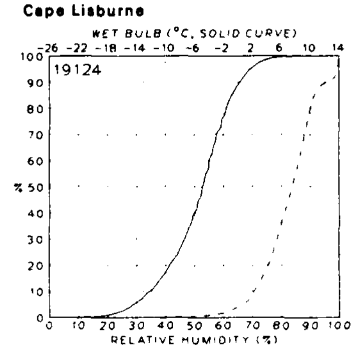
Tin City



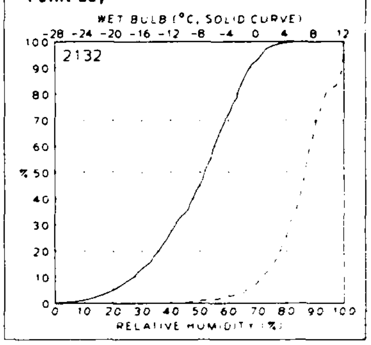
Kotzebue



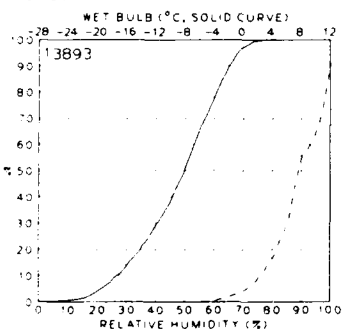
Cape Lisburne



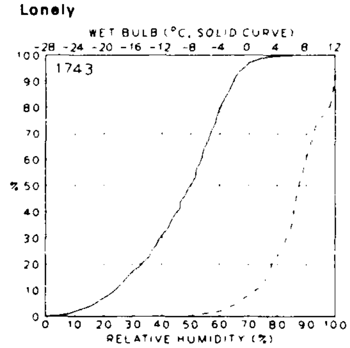
Point Lay



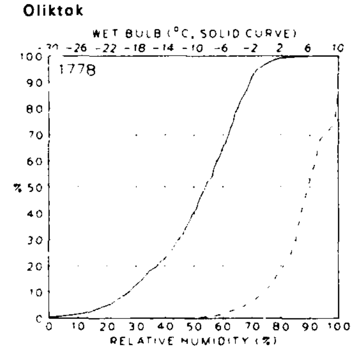
Barrow



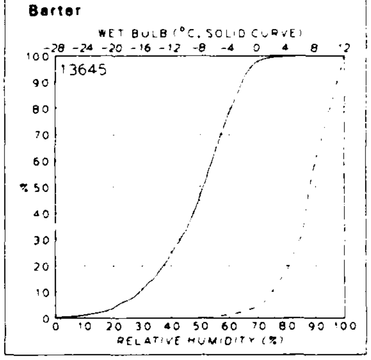
Lonely



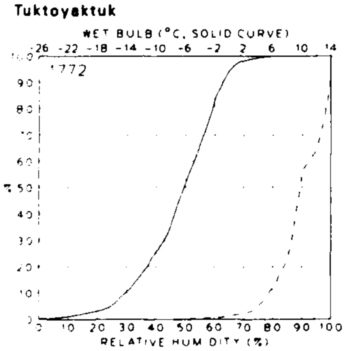
Oliktok



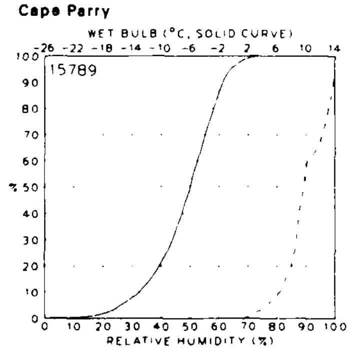
Barter



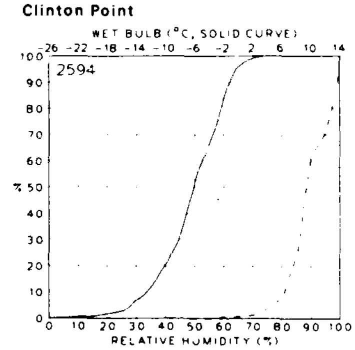
Tuktoyaktuk



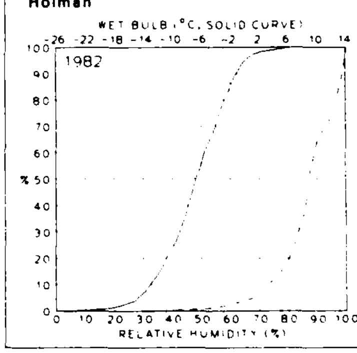
Cape Parry

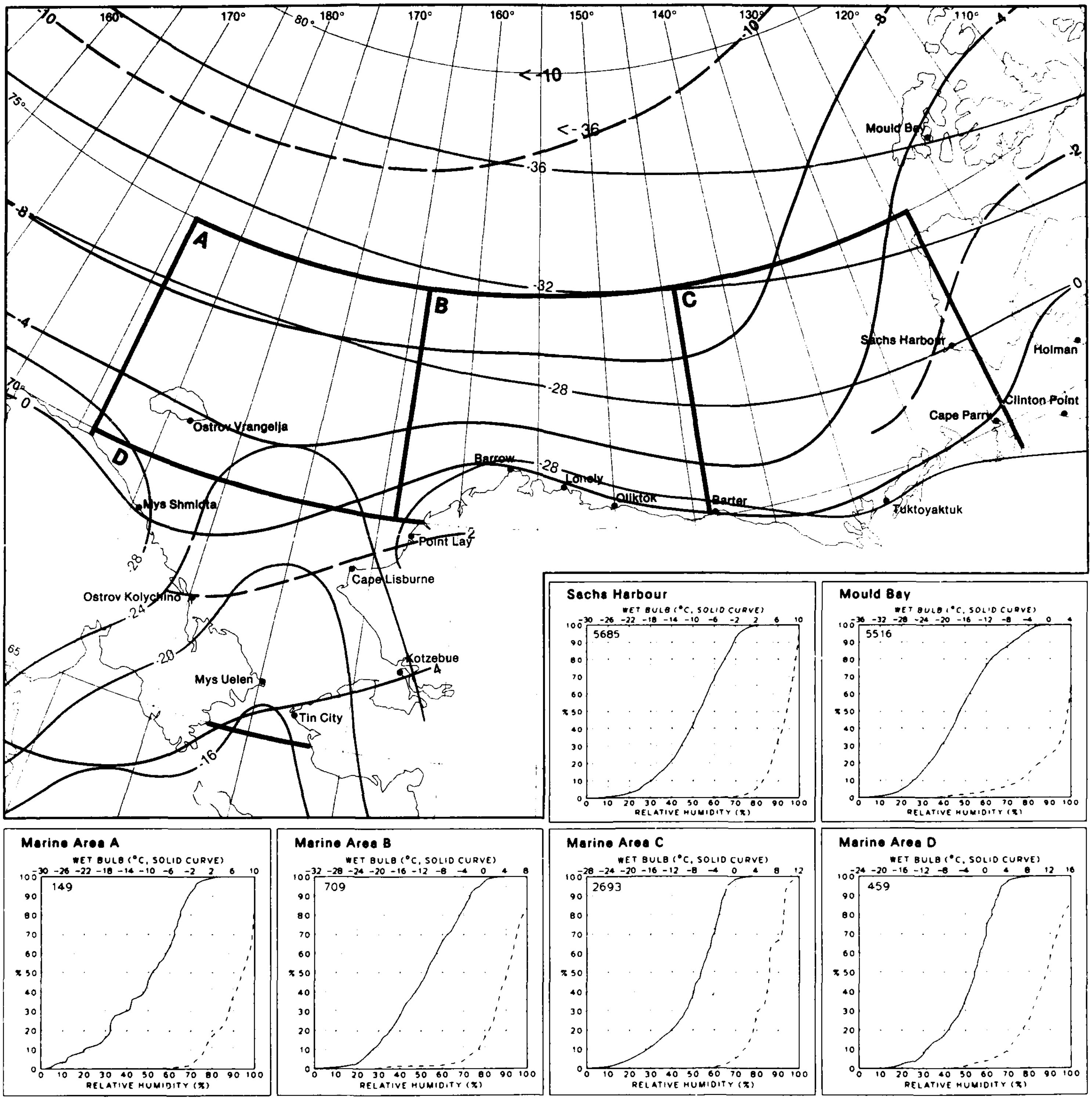


Clinton Point



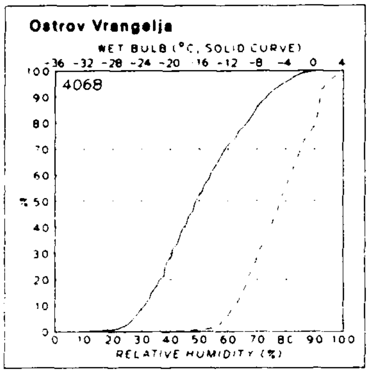
Holmen

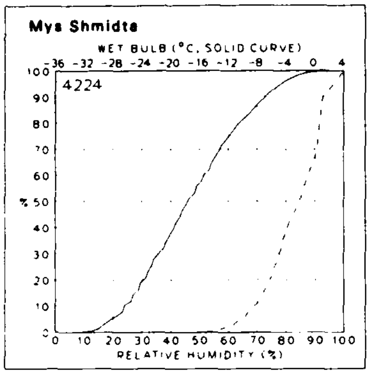


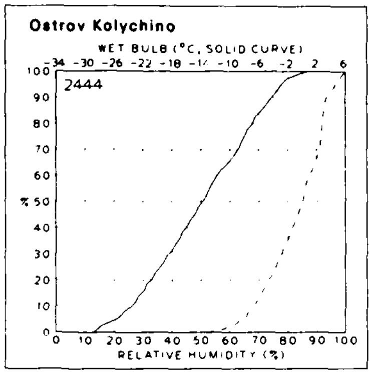


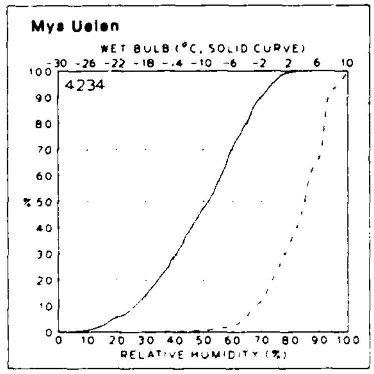
9 Dew Point Temperature Extremes

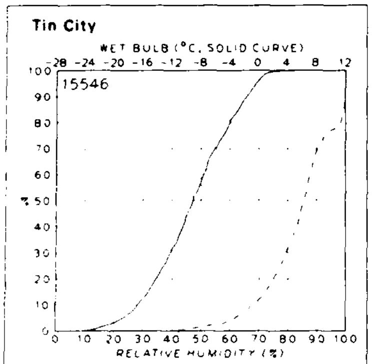
October

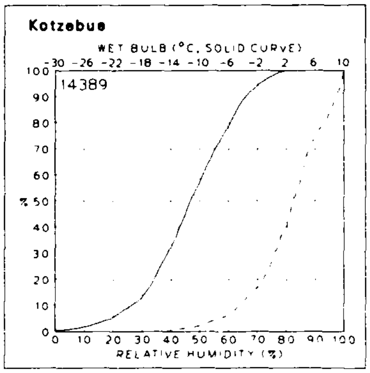

Ostrov Vrangelja
WET BULB (°C, SOLID CURVE)
4068
%
RELATIVE HUMIDITY (%)

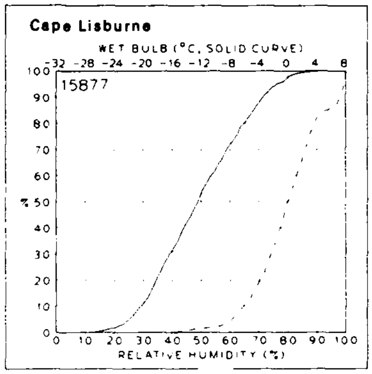

Mys Shmidte
WET BULB (°C, SOLID CURVE)
4224
%
RELATIVE HUMIDITY (%)

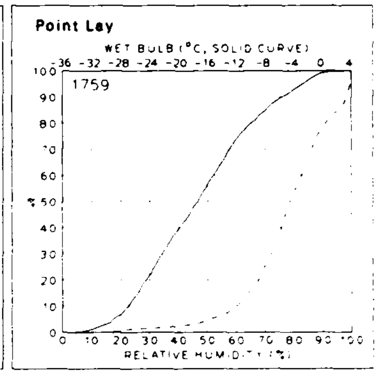

Ostrov Kolychino
WET BULB (°C, SOLID CURVE)
2444
%
RELATIVE HUMIDITY (%)

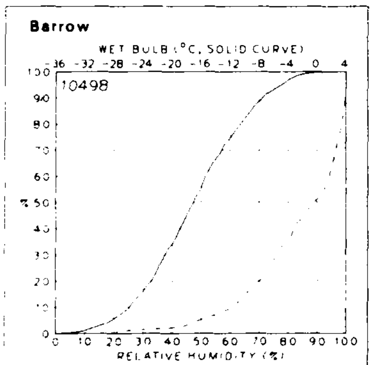

Mys Uelen
WET BULB (°C, SOLID CURVE)
4234
%
RELATIVE HUMIDITY (%)

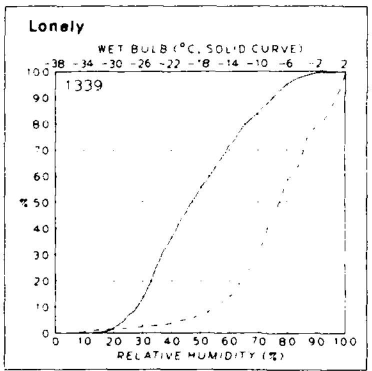

Tin City
WET BULB (°C, SOLID CURVE)
15546
%
RELATIVE HUMIDITY (%)

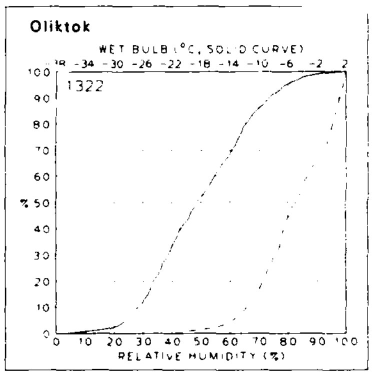

Kotzebue
WET BULB (°C, SOLID CURVE)
14389
%
RELATIVE HUMIDITY (%)


Cape Lisburne
WET BULB (°C, SOLID CURVE)
15877
%
RELATIVE HUMIDITY (%)


Point Lay
WET BULB (°C, SOLID CURVE)
1759
%


Barrow
WET BULB (°C, SOLID CURVE)
10498
%


Lonely
WET BULB (°C, SOLID CURVE)
1339
%
RELATIVE HUMIDITY (%)


Oliktok
1322
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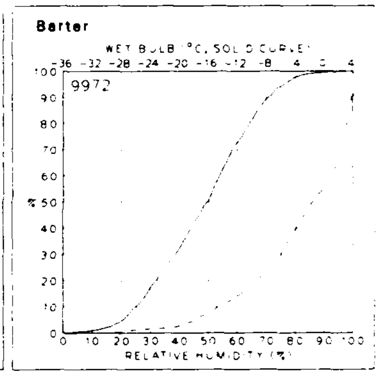
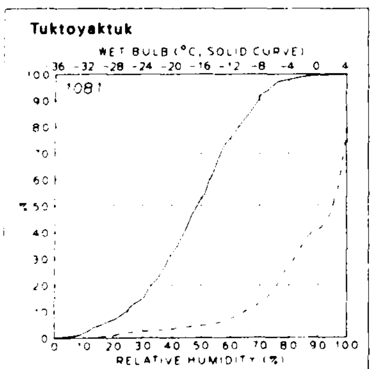
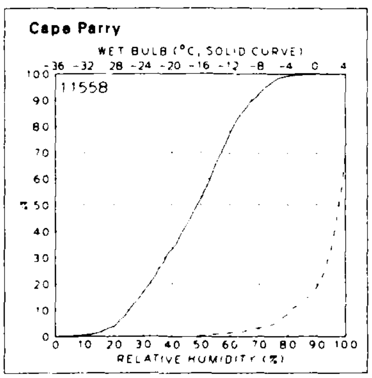
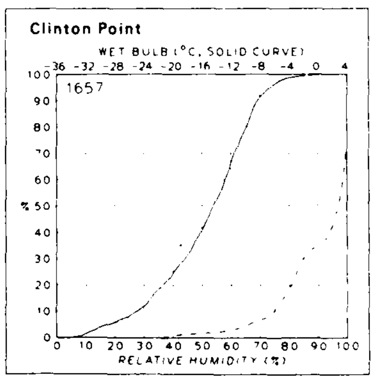
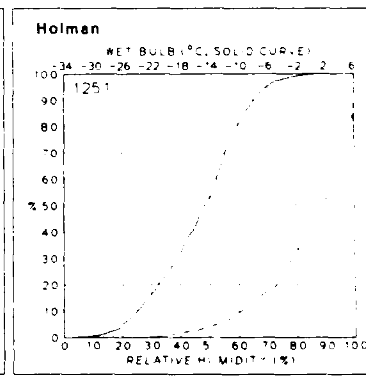
RELATIVE HUMIDITY (%)

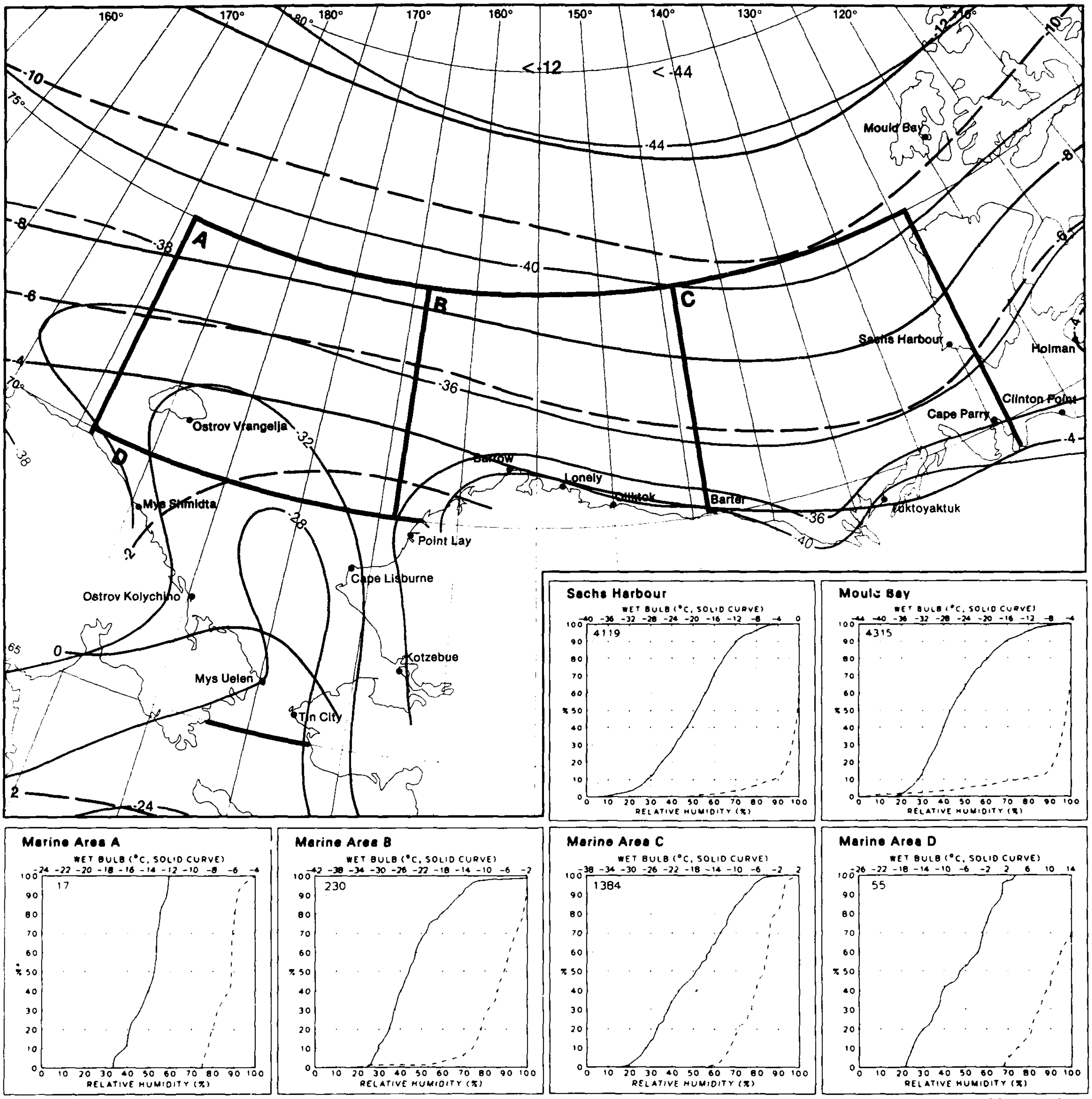

Barter
9972
%


Tuktoyaktuk
WET BULB (°C, SOLID CURVE)
%


Cape Parry
WET BULB (°C, SOLID CURVE)
11558
%
RELATIVE HUMIDITY (%)


Clinton Point
WET BULB (°C, SOLID CURVE)
1657
%
RELATIVE HUMIDITY (%)

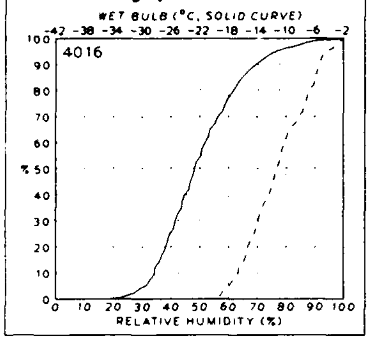

Holman
%



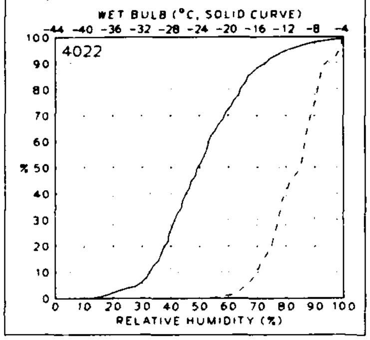
9 Dew Point Temperature Extremes

November

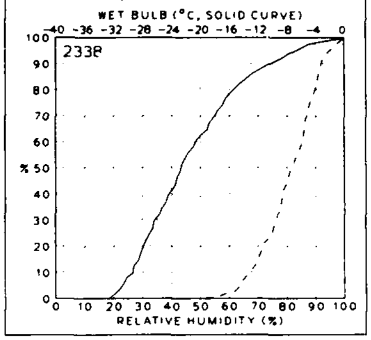
Ostrov Vrangelja



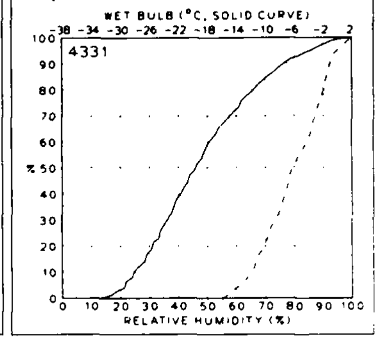
Mys Shmidta



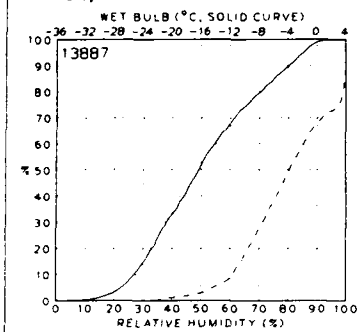
Ostrov Kolychino



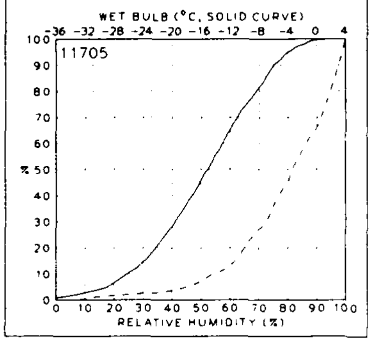
Mys Uelen



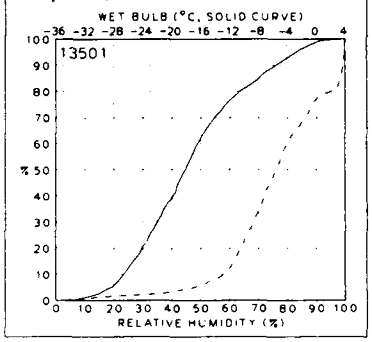
Tin City



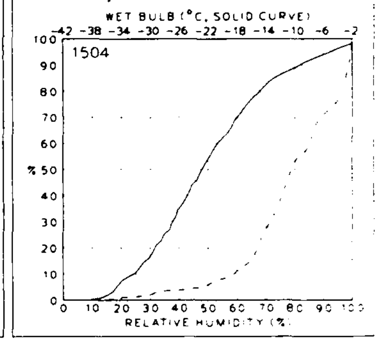
Kotzebue



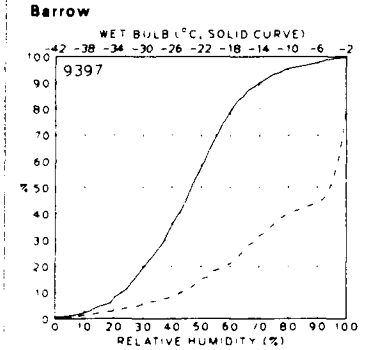
Cape Lisburne



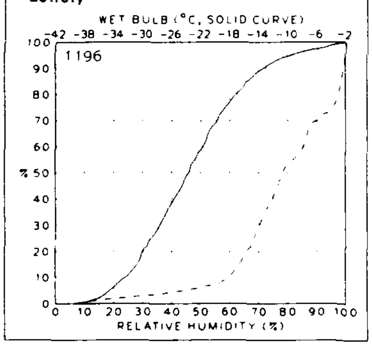
Point Lay



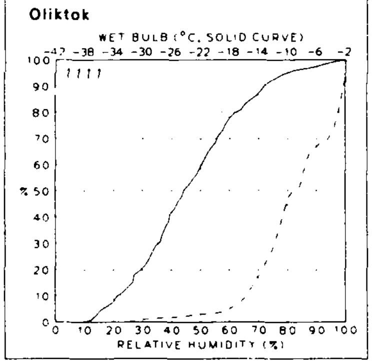
Barrow



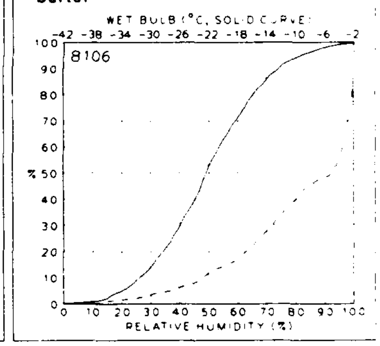
Lonely



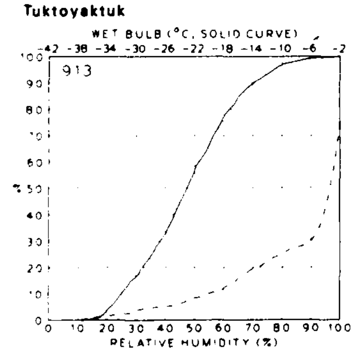
Oliktok



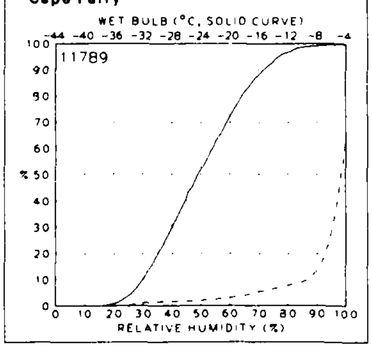
Barter



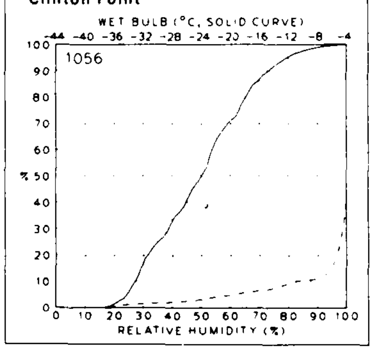
Tuktoyaktuk



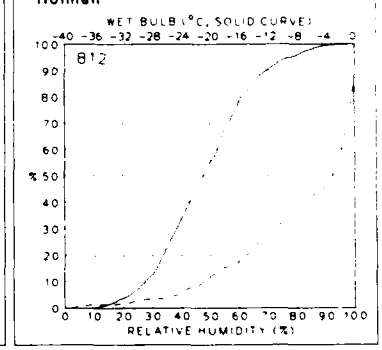
Cape Parry

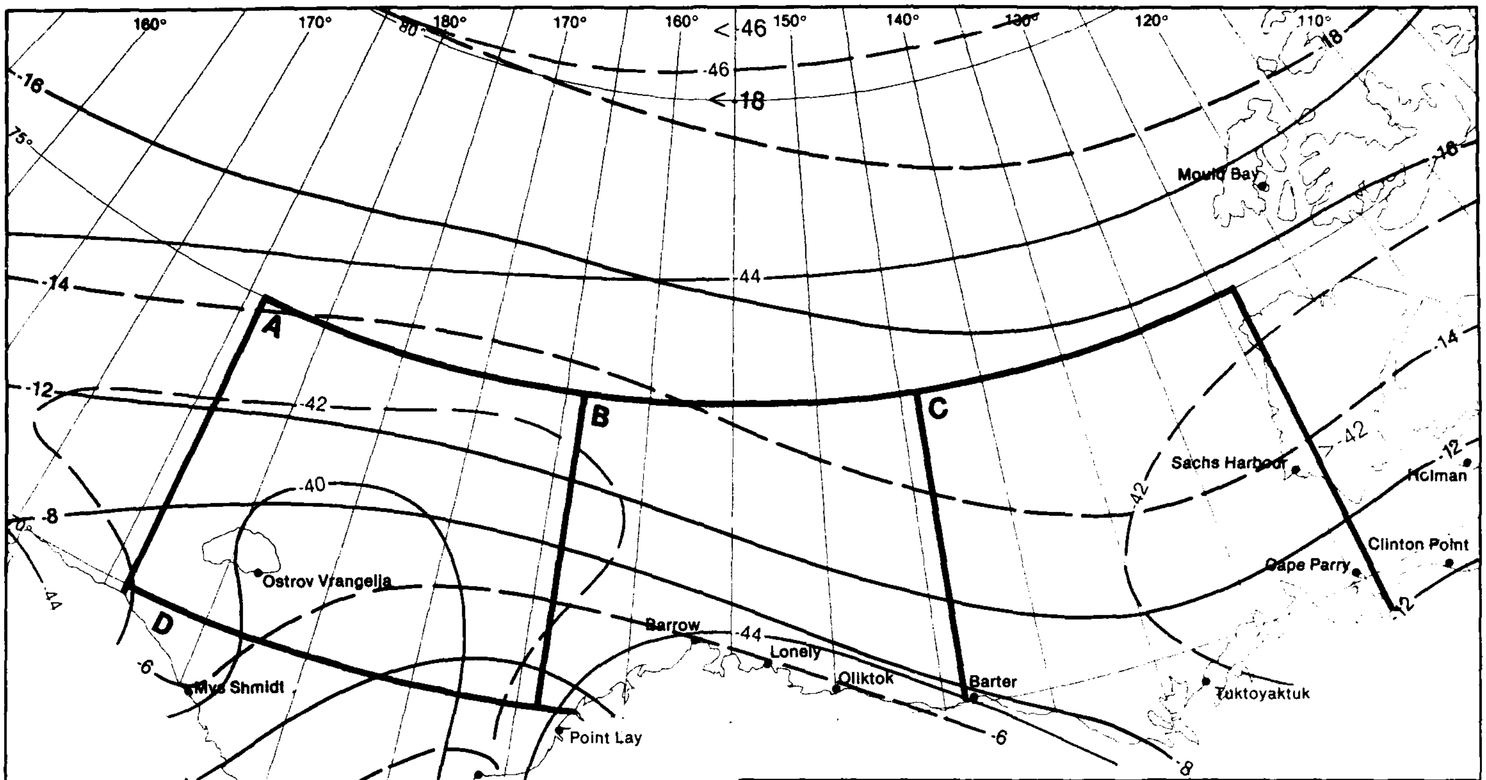


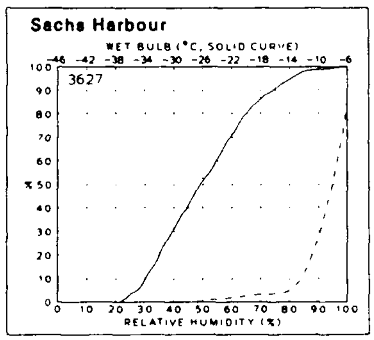
Clinton Point

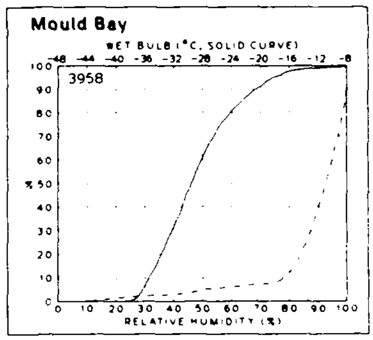


Holman







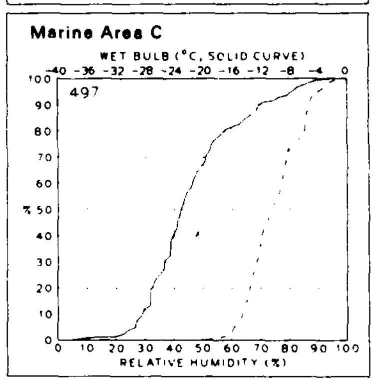


Marine Area A

No Data Available

Marine Area B

No Data Available



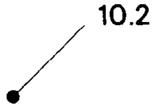
Marine Area D

No Data Available

9 Dew Point Temperature Extremes **December**

Map 10. Mean sea level pressure and vector mean wind

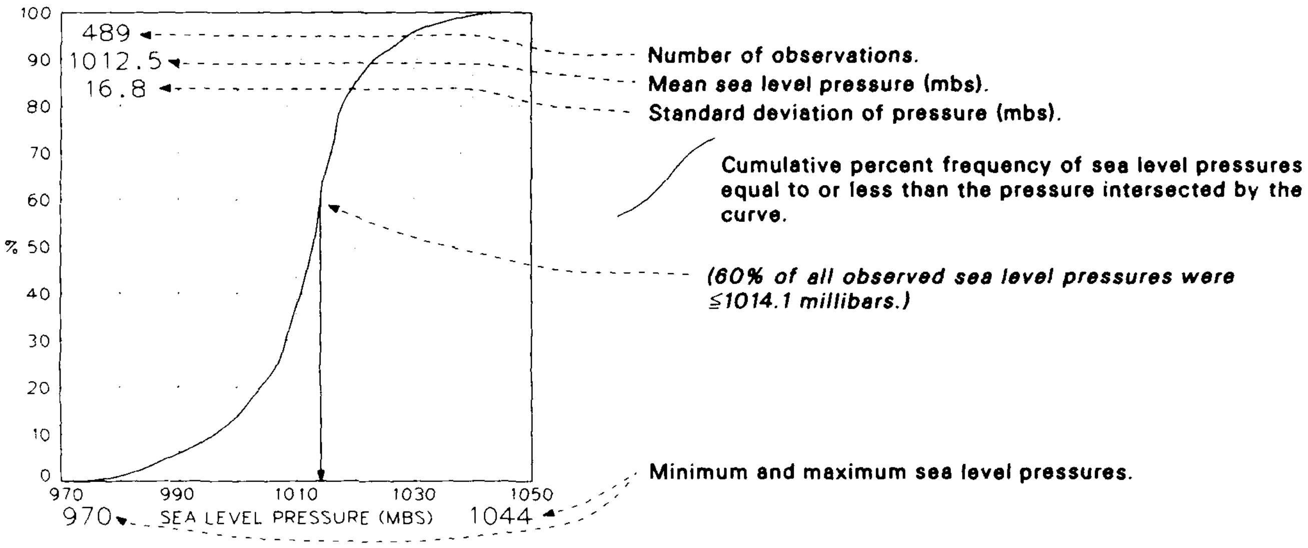
BLACK LINE – Mean sea level pressure (millibars).



Direction of flow toward station dot; vector magnitude in knots (example: vector mean wind is from northeast at 10.2 knots or 11.7 mph).

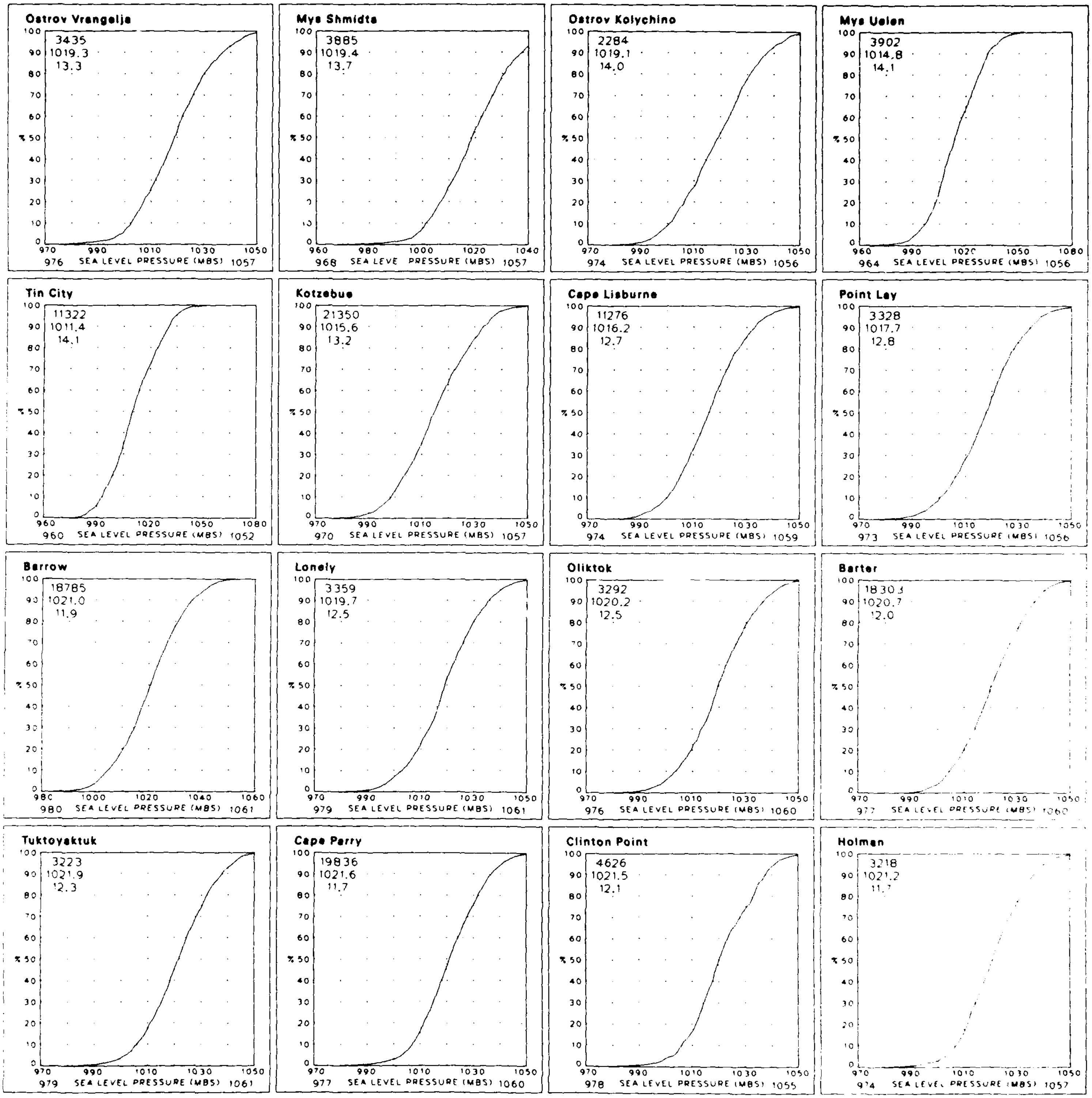
Albers Equal–Area Conic Projection

Graphs: Sea level pressure



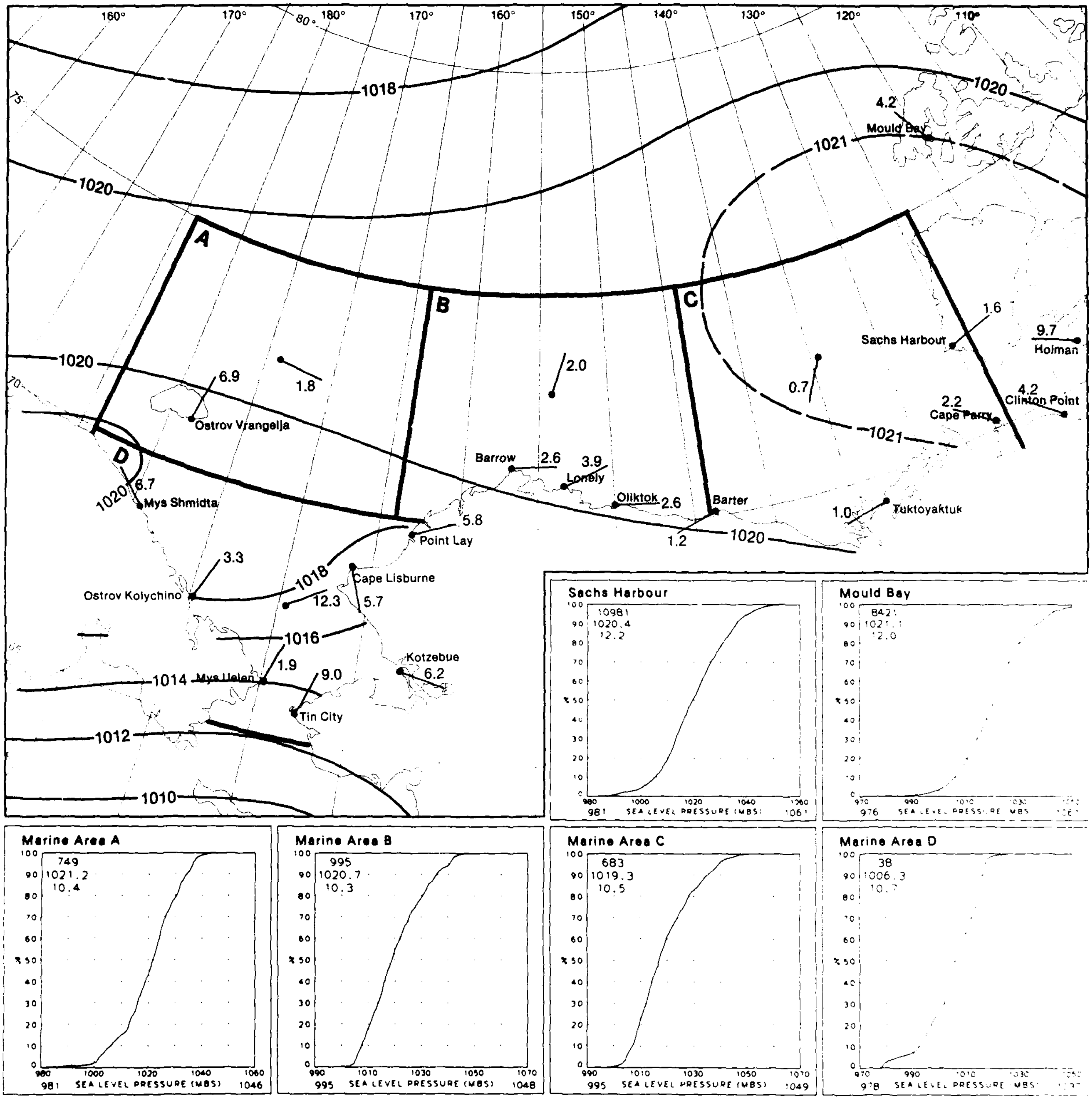
Sea level pressure is one of the most frequently recorded elements, but one of the least accurate because of instrument calibration and coding errors. Despite the inaccuracies of the individual readings, the large-scale patterns and mean gradients of the isopleth analyses are relatively accurate. The percentage of sea level pressure observations greater than a given value can be obtained from the graph by subtracting the cumulative percent frequency of that value from 100%.

In areas of high persistence (also called constancy, steadiness) of direction, the magnitude of the vector mean wind (Set 10 should closely approach that of the scalar mean wind (Set 13).

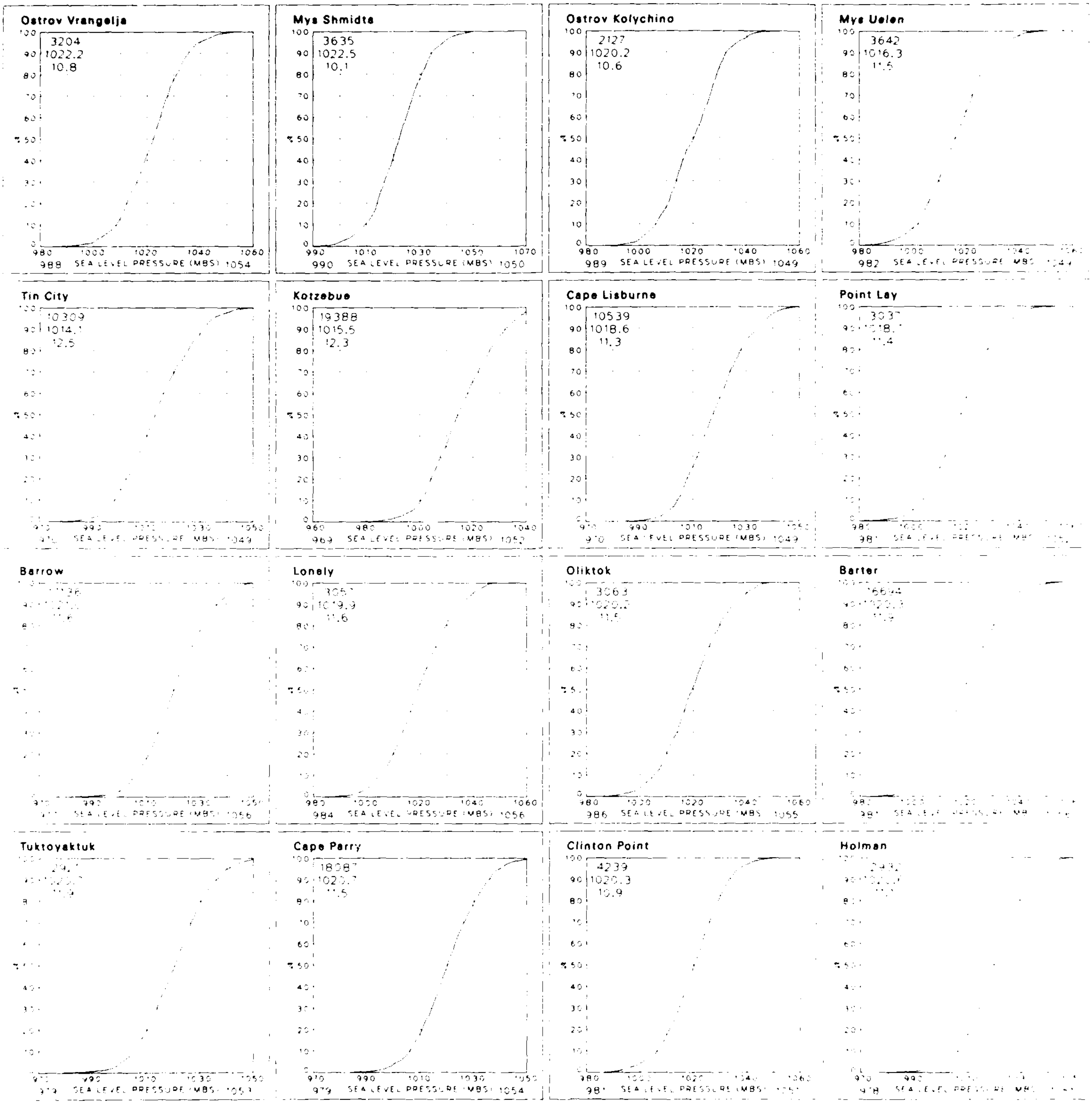


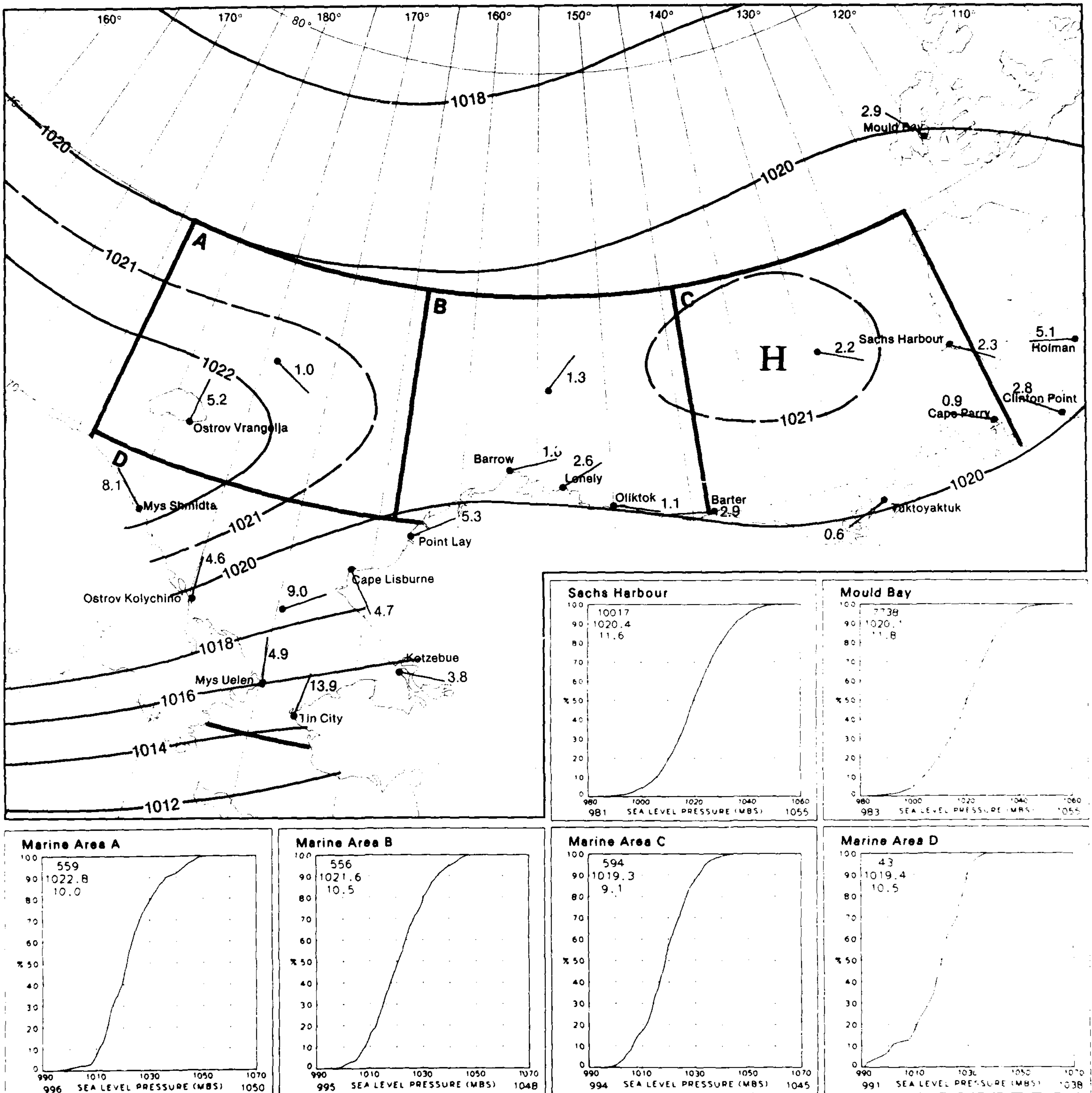
January

10 Sea Level Pressure

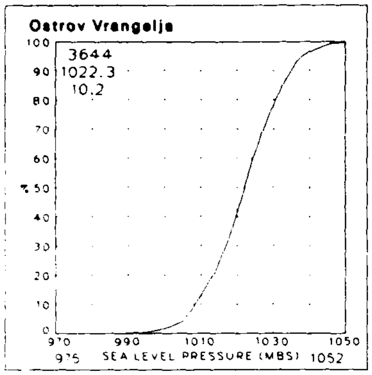


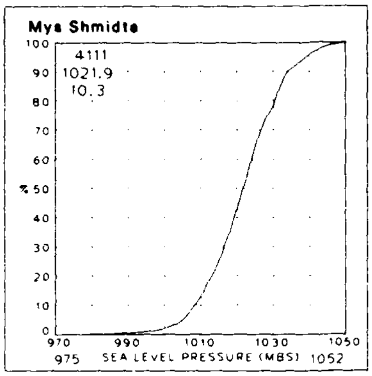
10 Mean Sea Level Pressure and Vector Mean Wind **January**

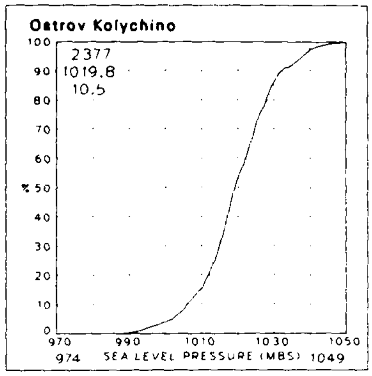

Ostrov Vrangelja
3204
1022.2
10.8
988 SEA LEVEL PRESSURE (MBS) 1054
Mys Shmidta
3635
1022.5
10.1
990 SEA LEVEL PRESSURE (MBS) 1050
Ostrov Kolychino
2127
1020.2
10.6
989 SEA LEVEL PRESSURE (MBS) 1049
Mys Uelen
3642
1016.3
982
Tin City
10309
Kotzebue
19388
1015.5
12.3
969 SEA LEVEL PRESSURE (MBS) 1052
Cape Lisburne
10539
1018.6
11.3
970 SEA LEVEL PRESSURE (MBS) 1049
Point Lay
Barrow
Lonely
984 SEA LEVEL PRESSURE (MBS) 1056
Oliktok
3063
986 SEA LEVEL PRESSURE (MBS) 1055
Barter
Tuktoyaktuk
Cape Parry
979 SEA LEVEL PRESSURE (MBS) 1054
Clinton Point
4239
1020.3
10.9
Holman

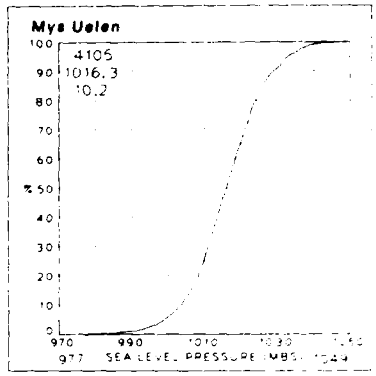


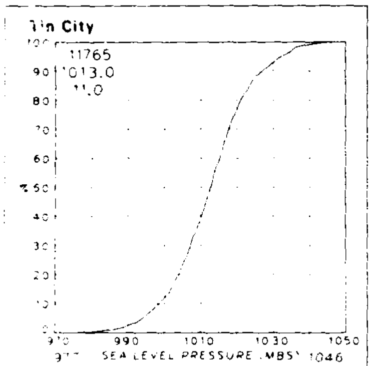
10 Mean Sea Level Pressure and Vector Mean Wind **February**

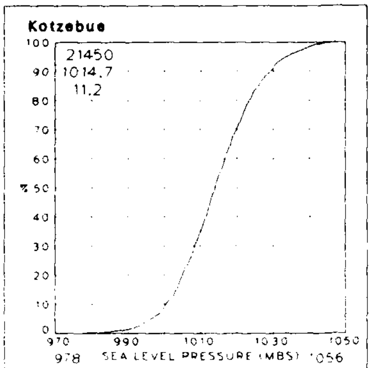

Ostrov Vrangelja
3644
1022.3
10.2
975 SEA LEVEL PRESSURE (MBS) 1052

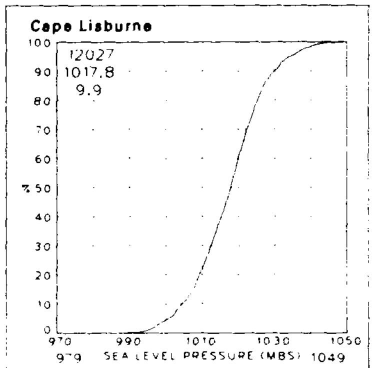

Mys Shmidte
4111
1021.9
10.3
975 SEA LEVEL PRESSURE (MBS) 1052

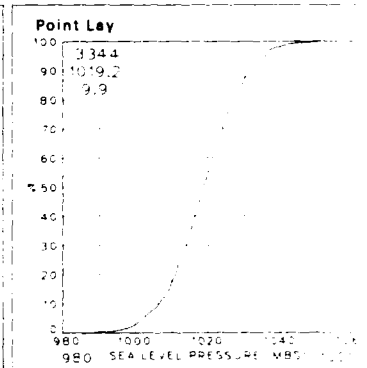

Ostrov Kolychino
2377
1019.8
10.5
974 SEA LEVEL PRESSURE (MBS) 1049

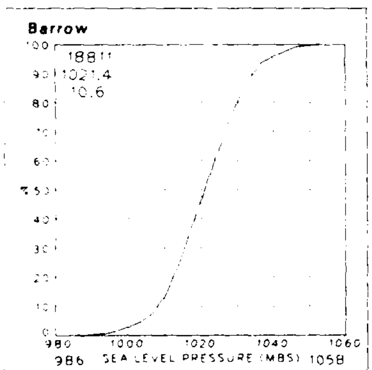

Mys Uelen
4105
1016.3
10.2
SEA LEVEL PRESSURE (MBS)

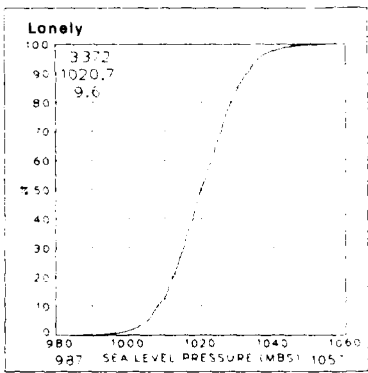

11765
1013.0
SEA LEVEL PRESSURE (MBS) 1046

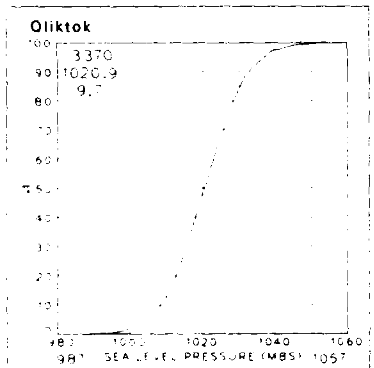

Kotzebue
21450
1014.7
11.2
978 SEA LEVEL PRESSURE (MBS)

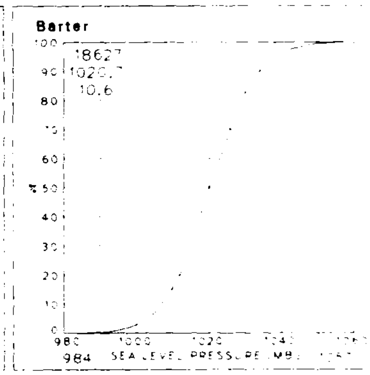

Cape Lisburne
12027
1017.8
9.9
SEA LEVEL PRESSURE (MBS) 1049

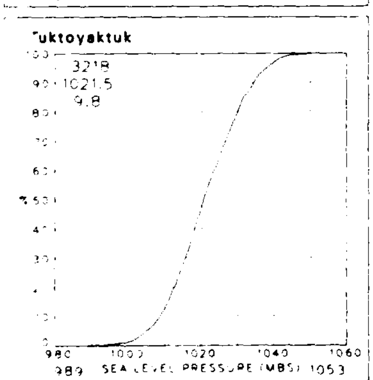

Point Lay
3344
9.9
980 SEA LEVEL PRESSURE

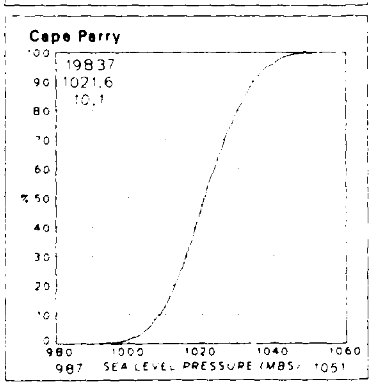

Barrow
1021.4
10.6
986 SEA LEVEL PRESSURE (MBS) 1058

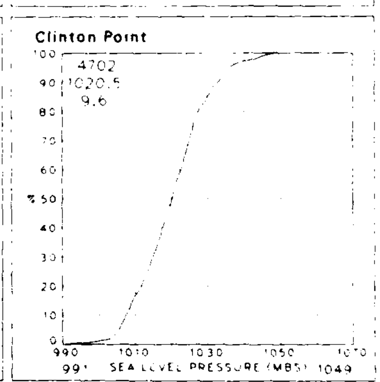

Lonely
1020.7
9.6
987 SEA LEVEL PRESSURE (MBS)

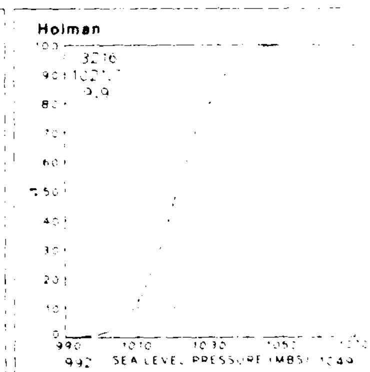

Oliktok
3370
1020.9
SEA LEVEL PRESSURE (MBS)

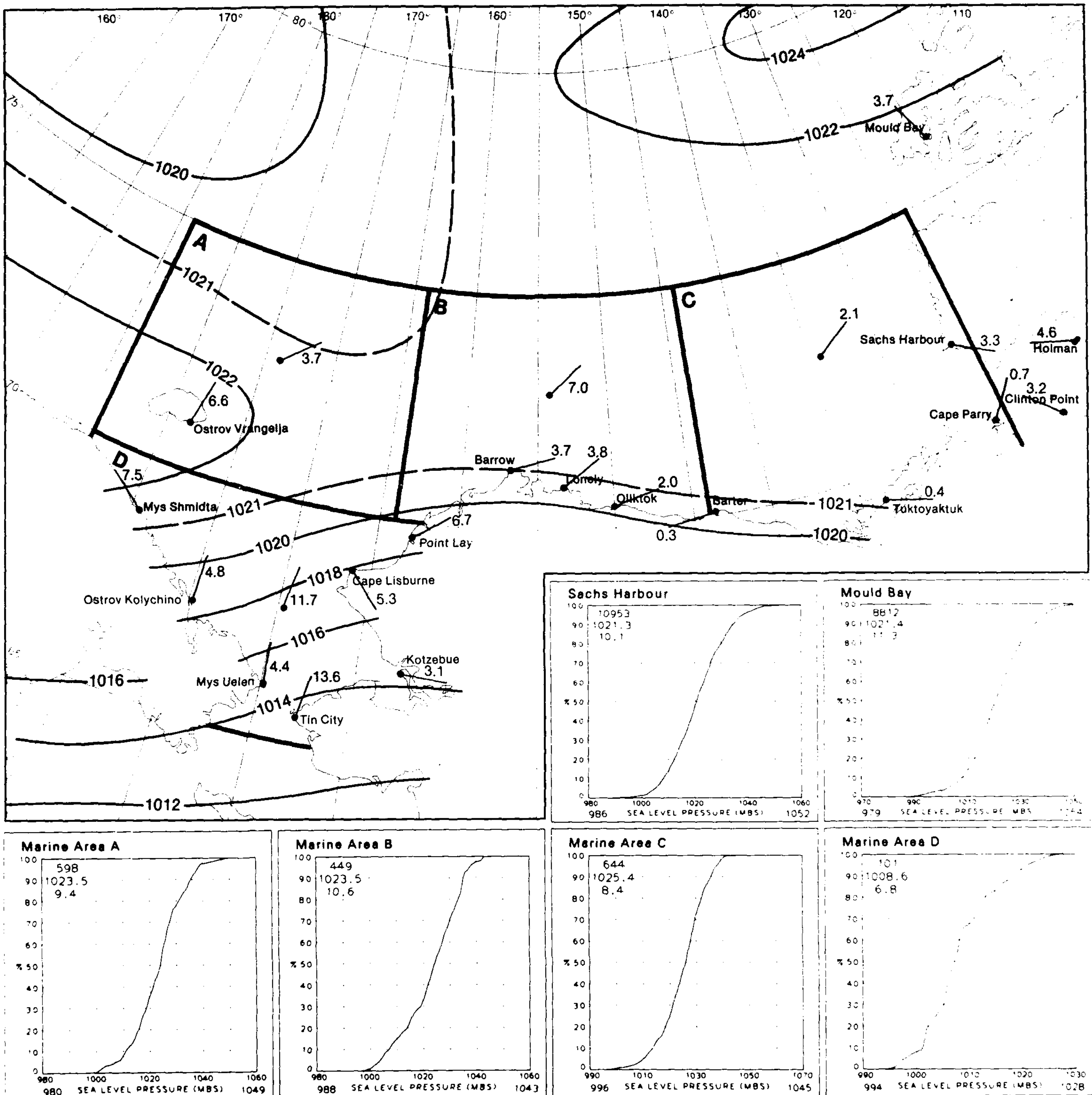

Barter
10.6
984 SEA LEVEL PRESSURE


1021.5
9.8
SEA LEVEL PRESSURE (MBS)

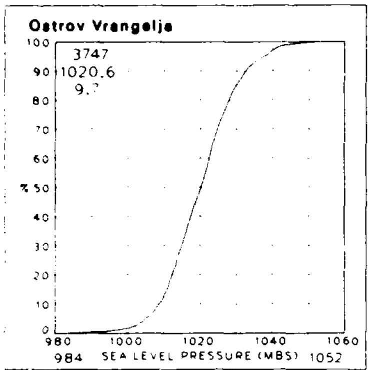

Cape Parry
19837
1021.6
987 SEA LEVEL PRESSURE (MBS) 1051

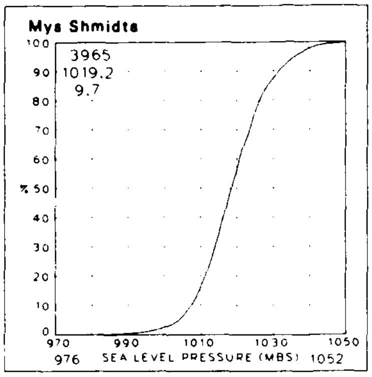

Clinton Point
4702
9.6
SEA LEVEL PRESSURE (MBS) 1049

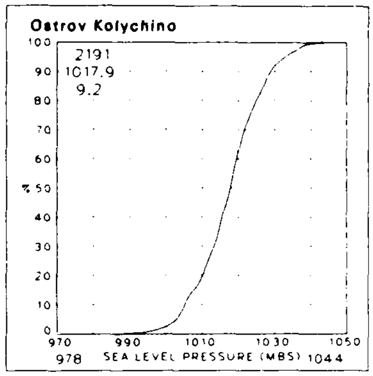

Holman
SEA LEVEL PRESSURE (MBS)

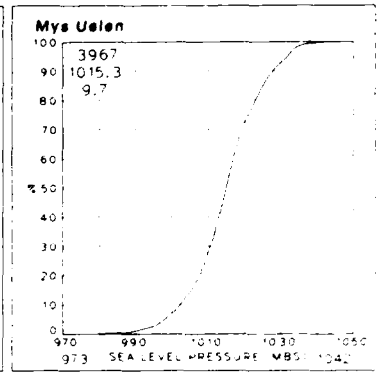


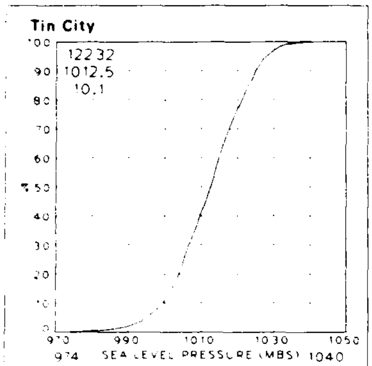
10 Mean Sea Level Pressure and Vector Mean Wind **March**

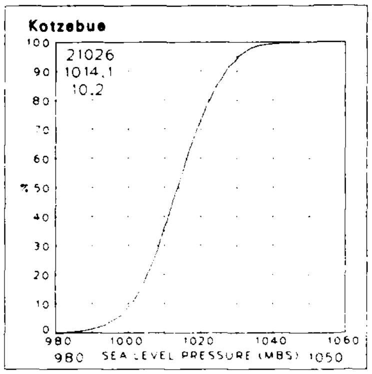

Ostrov Vrangelja
3747
1020.6
984 SEA LEVEL PRESSURE (MBS) 1052

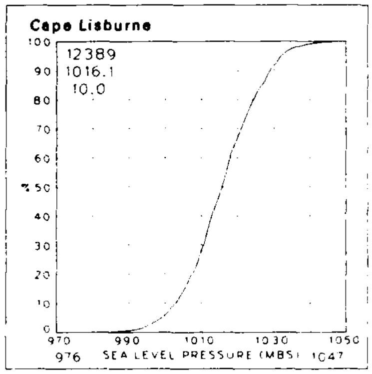

Mys Shmidta
3965
1019.2
9.7
976 SEA LEVEL PRESSURE (MBS) 1052

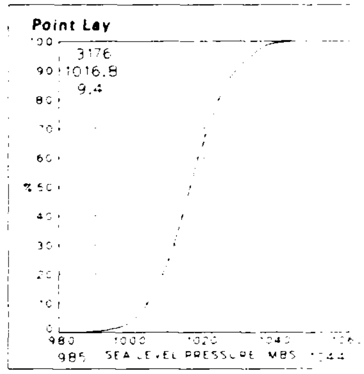

Ostrov Kolychino
2191
1017.9
9.2
978 SEA LEVEL PRESSURE (MBS) 1044

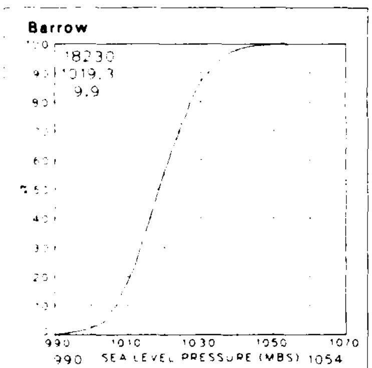

Mys Uelen
3967
1015.3
9.7

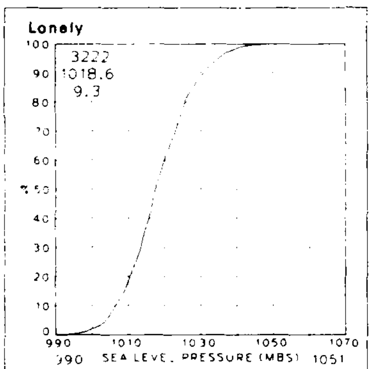

Tin City
12232
1012.5
10.1
974 SEA LEVEL PRESSURE (MBS) 1040

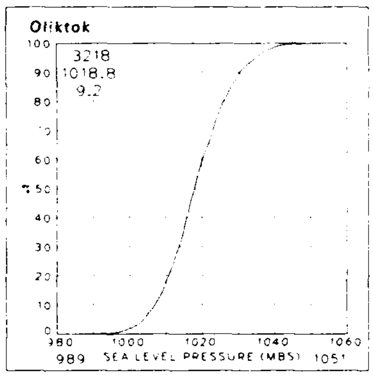

Kotzebue
21026
1014.1
10.2
980 SEA LEVEL PRESSURE (MBS) 1050

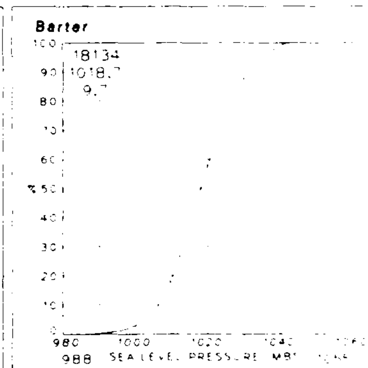

Cape Lisburne
12389
1016.1
10.0
976 SEA LEVEL PRESSURE (MBS) 1047

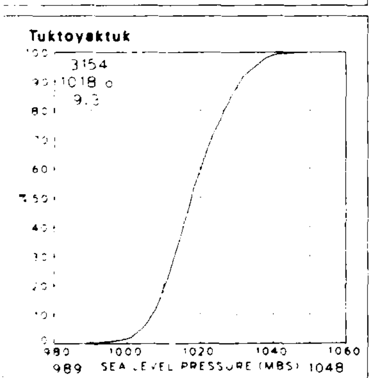

Point Lay
3176
1016.8
9.4

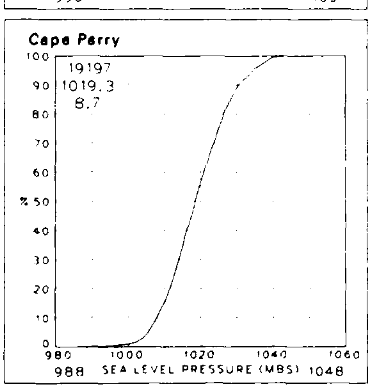

Barrow
18230
1019.3
9.9
990 SEA LEVEL PRESSURE (MBS) 1054

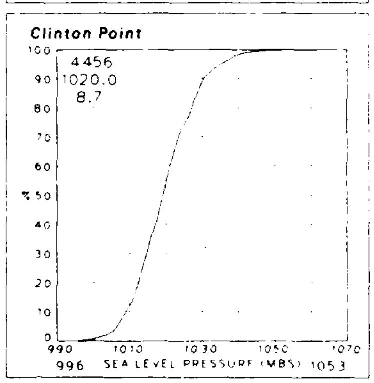

Lonely
3222
1018.6
9.3
990 SEA LEVEL PRESSURE (MBS) 1051

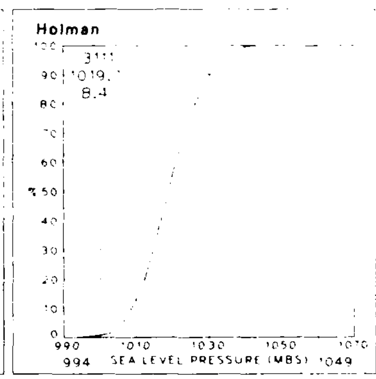

Oliktok
3218
1018.8
9.2
989 SEA LEVEL PRESSURE (MBS)

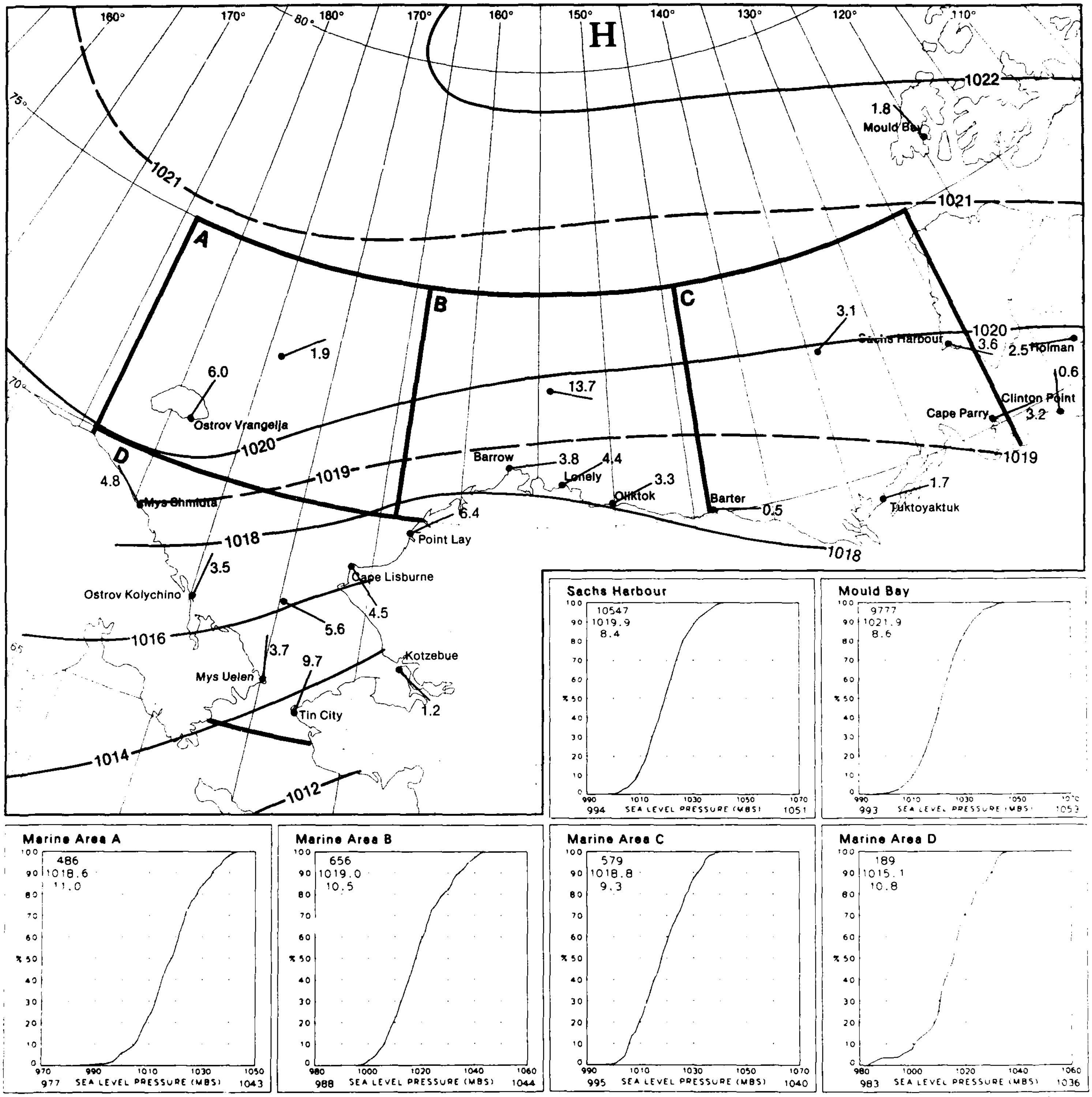

Barter
18134
988


Tuktoyaktuk
3154
9.3
989 SEA LEVEL PRESSURE (MBS) 1048


Cape Parry
19197
1019.3
8.7
988 SEA LEVEL PRESSURE (MBS) 1048

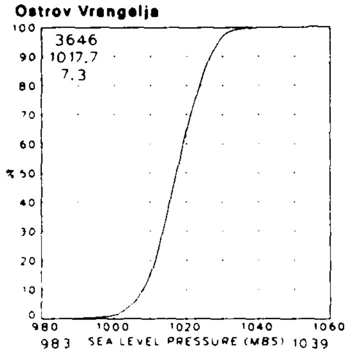

Clinton Point
4456
1020.0
8.7
996 SEA LEVEL PRESSURE (MBS) 1053


Holman
8.4
994 SEA LEVEL PRESSURE (MBS) 1049

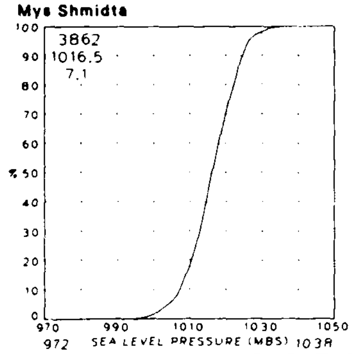


10 Mean Sea Level Pressure and Vector Mean Wind **April**

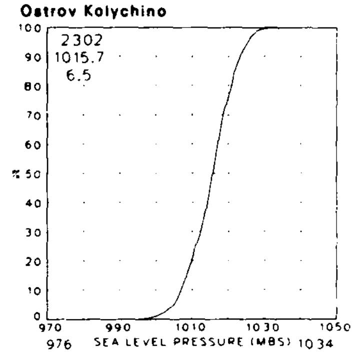
Ostrov Vrangelja



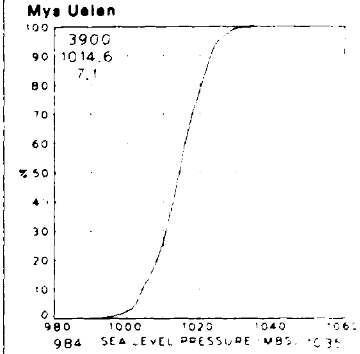
Mys Shmidta



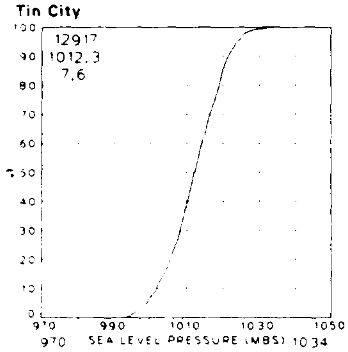
Ostrov Kolychino



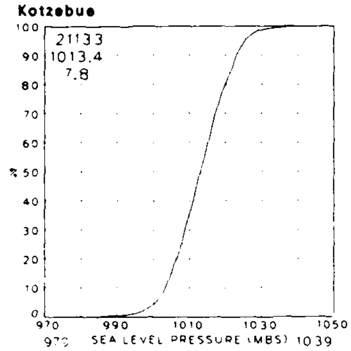
Mys Uelen



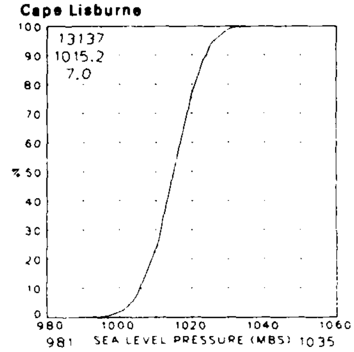
Tin City



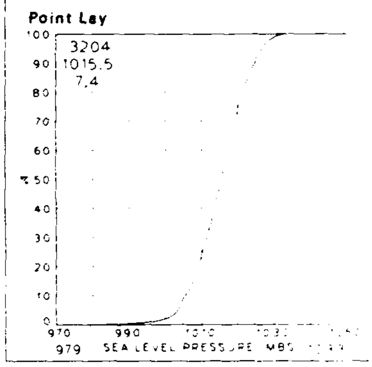
Kotzebue



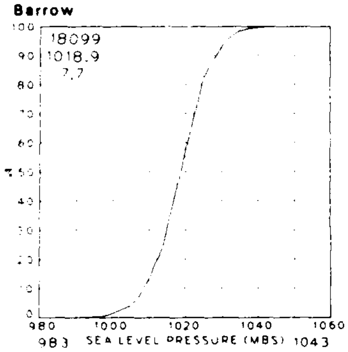
Cape Lisburne



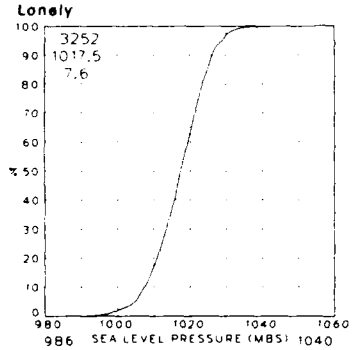
Point Lay



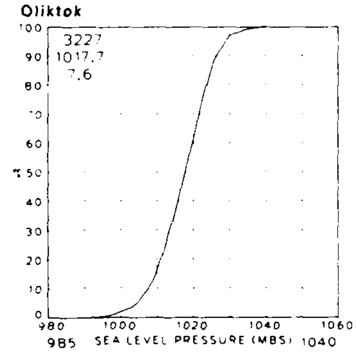
Barrow



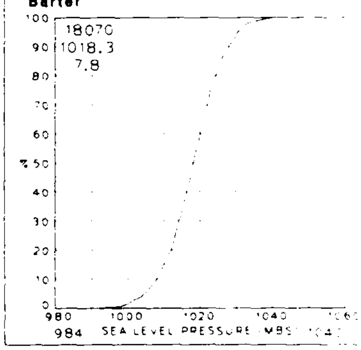
Lonely



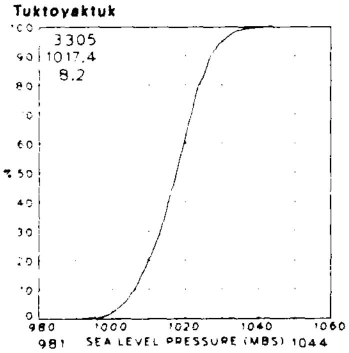
Oliktok



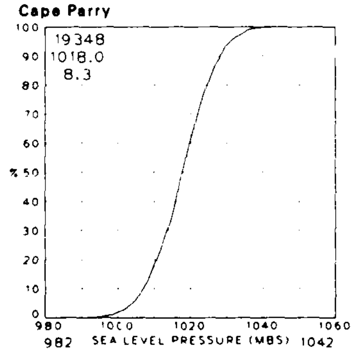
Barter



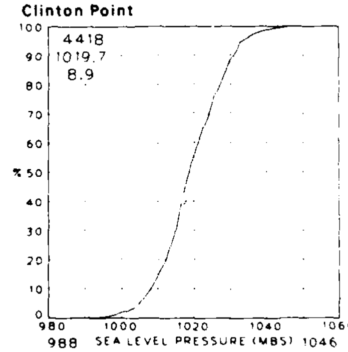
Tuktoyaktuk



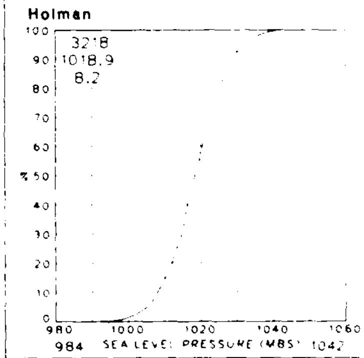
Cape Parry

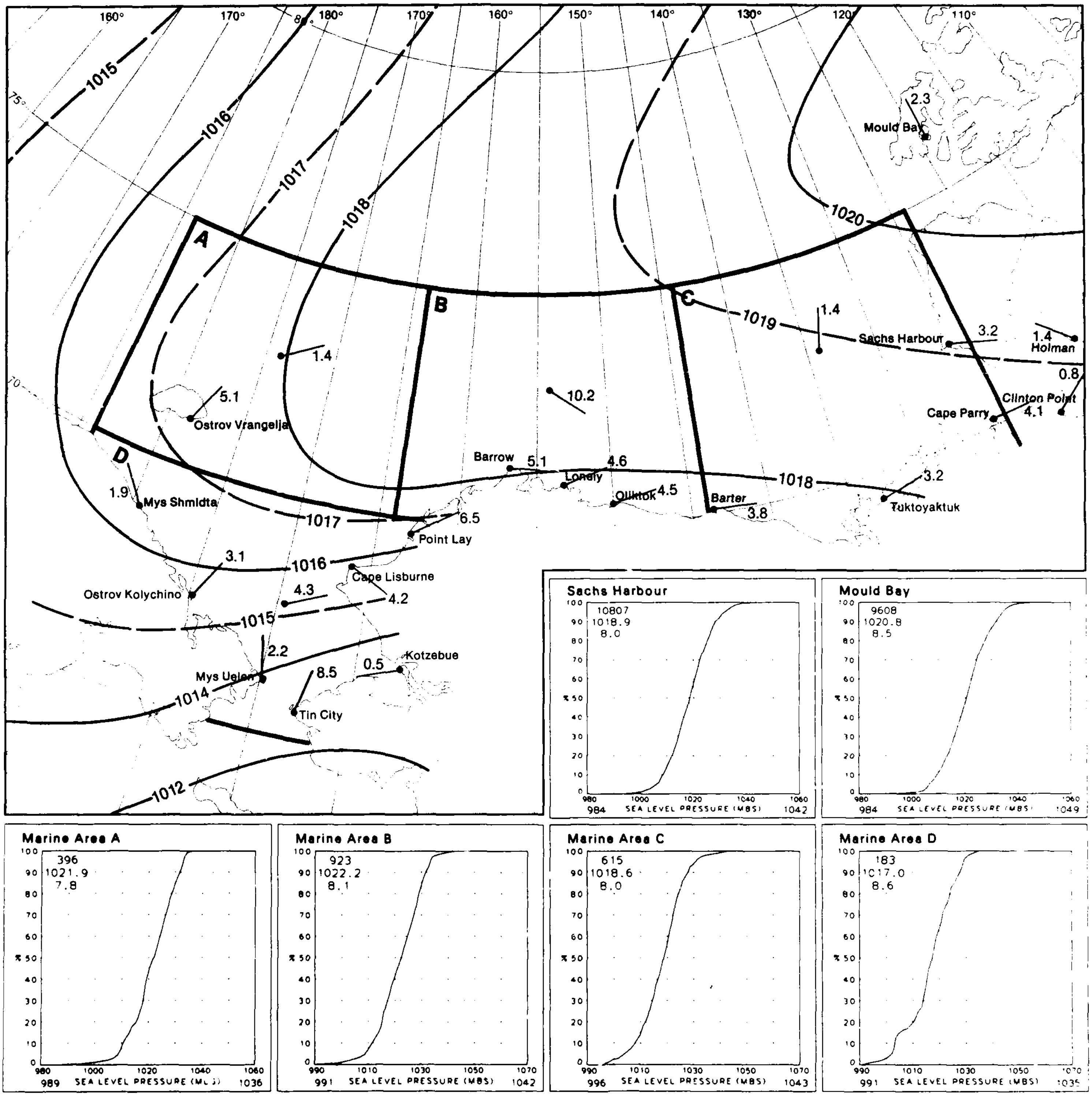


Clinton Point

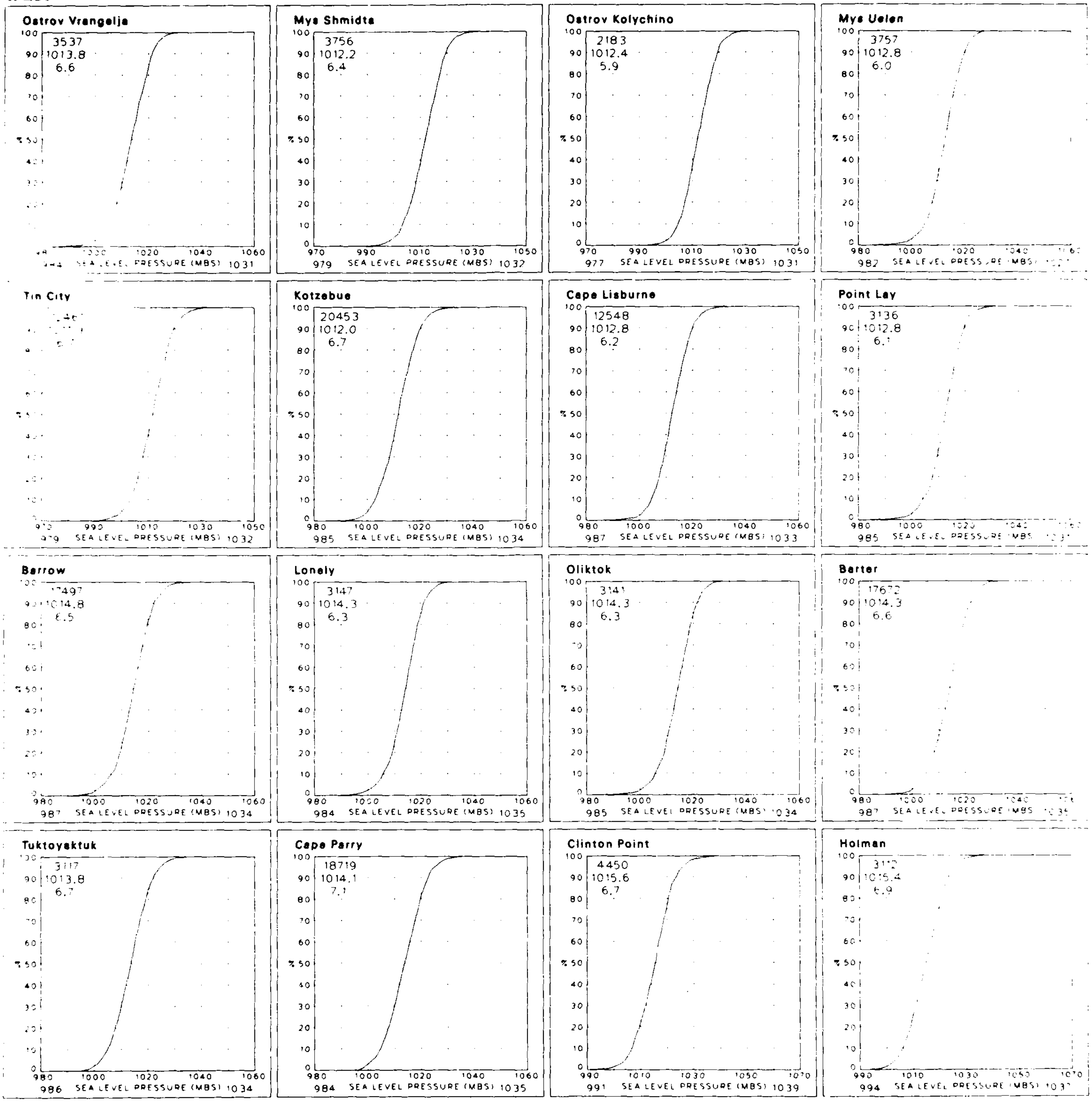


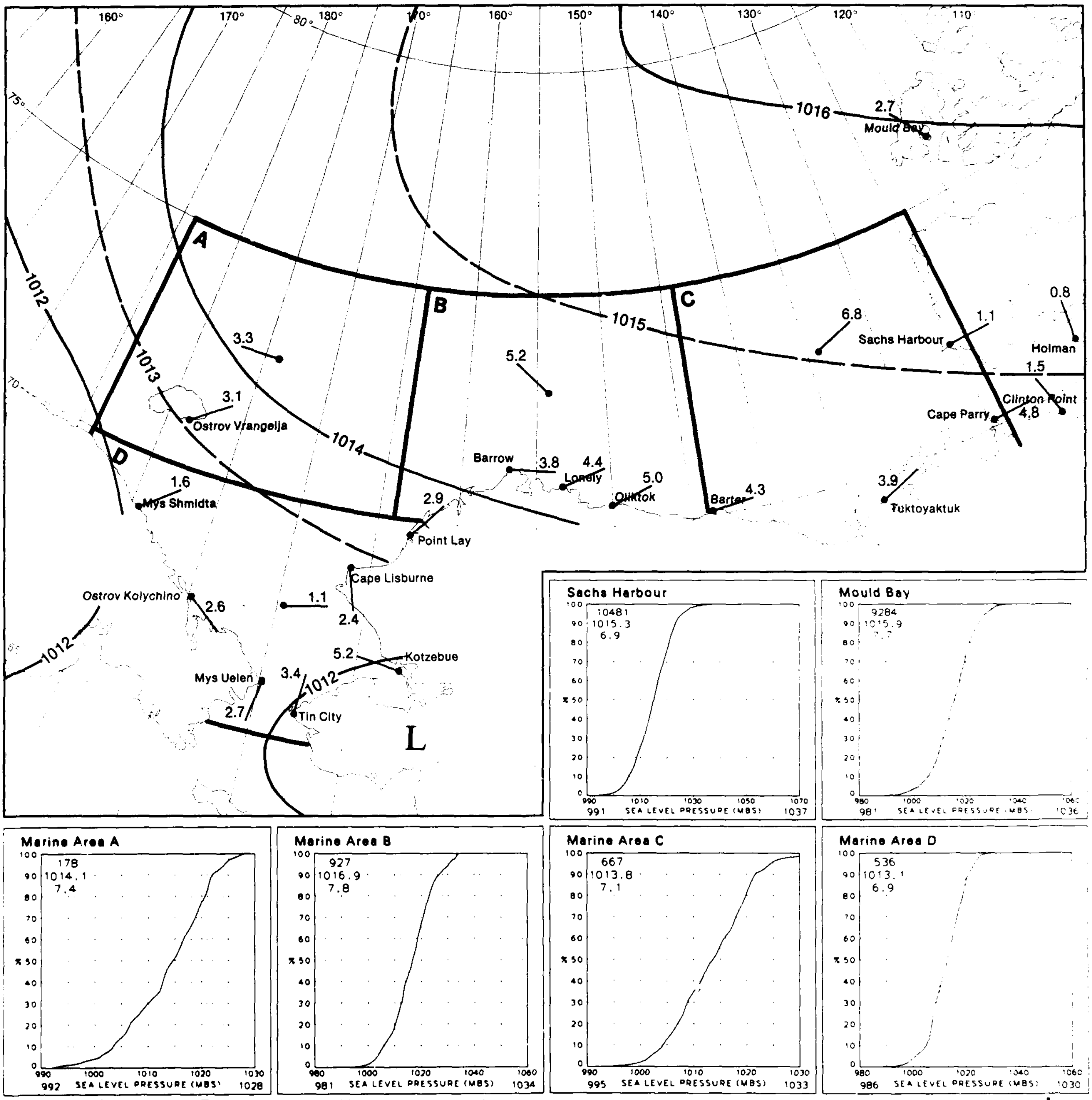
Holman



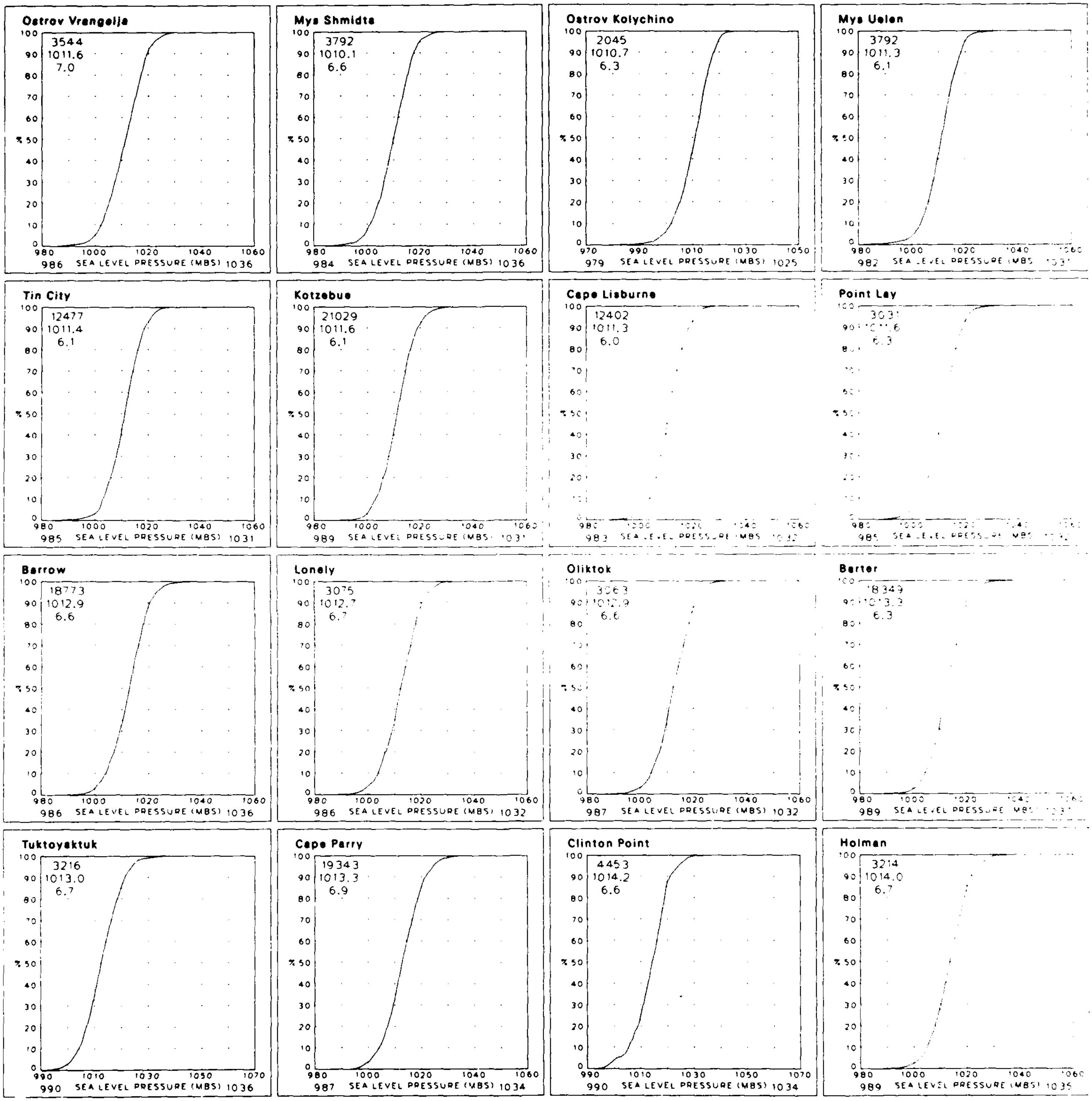


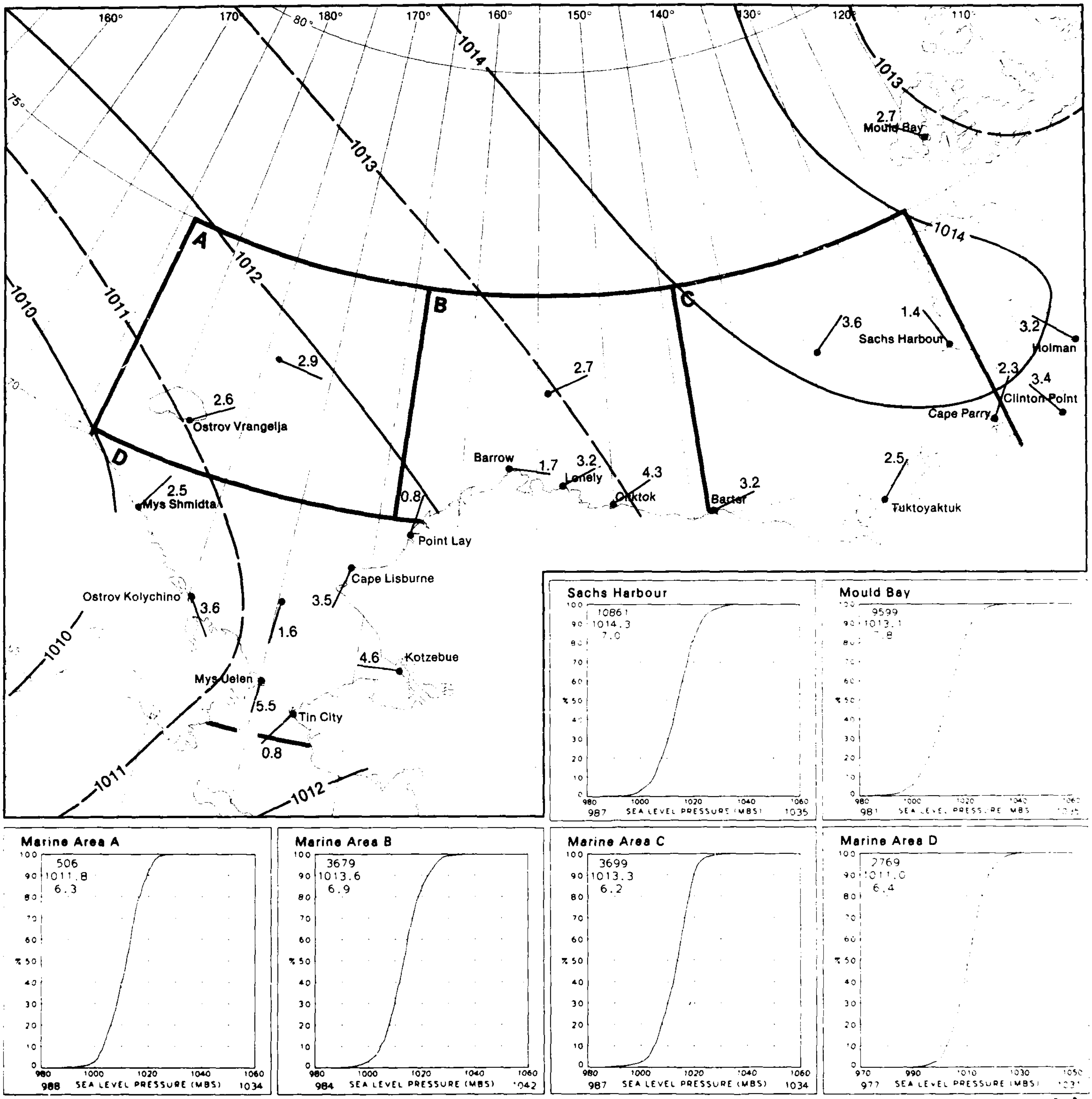
10 Mean Sea Level Pressure and Vector Mean Wind **May**


Ostrov Vrangelja
3537
1013.8
6.6
SEA LEVEL PRESSURE (MBS)
1031
Mys Shmidta
3756
1012.2
6.4
979 SEA LEVEL PRESSURE (MBS) 1032
Ostrov Kolychino
2183
1012.4
5.9
977 SEA LEVEL PRESSURE (MBS) 1031
Mys Uelen
3757
1012.8
6.0
982 SEA LEVEL PRESSURE (MBS)
Tin City
SEA LEVEL PRESSURE (MBS) 1032
Kotzebue
20453
1012.0
6.7
985 SEA LEVEL PRESSURE (MBS) 1034
Cape Lisburne
12548
1012.8
6.2
987 SEA LEVEL PRESSURE (MBS) 1033
Point Lay
3136
1012.8
985 SEA LEVEL PRESSURE (MBS)
Barrow
1014.8
987 SEA LEVEL PRESSURE (MBS) 1034
Lonely
3147
1014.3
6.3
984 SEA LEVEL PRESSURE (MBS) 1035
Oliktok
1014.3
6.3
985 SEA LEVEL PRESSURE (MBS) 1034
Barter
1014.3
6.6
987 SEA LEVEL PRESSURE (MBS)
Tuktoyaktuk
1013.8
6.7
986 SEA LEVEL PRESSURE (MBS) 1034
Cape Parry
18719
1014.1
984 SEA LEVEL PRESSURE (MBS) 1035
Clinton Point
4450
1015.6
6.7
991 SEA LEVEL PRESSURE (MBS) 1039
Holman
994 SEA LEVEL PRESSURE (MBS)



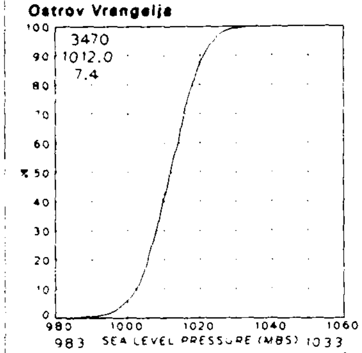
10 Mean Sea Level Pressure and Vector Mean Wind **June**


Ostrov Vrangelja
3544
1011.6
7.0
986 SEA LEVEL PRESSURE (MBS) 1036
Mys Shmidta
3792
1010.1
6.6
984 SEA LEVEL PRESSURE (MBS) 1036
Ostrov Kolychino
2045
1010.7
6.3
979 SEA LEVEL PRESSURE (MBS) 1025
Mys Uelen
3792
1011.3
6.1
Tin City
12477
1011.4
6.1
985 SEA LEVEL PRESSURE (MBS) 1031
Kotzebue
21029
1011.6
6.1
Cape Lisburne
12402
1011.3
6.0
Point Lay
6.3
Barrow
18773
1012.9
6.6
986 SEA LEVEL PRESSURE (MBS) 1036
Lonely
986 SEA LEVEL PRESSURE (MBS) 1032
Oliktok
6.6
987 SEA LEVEL PRESSURE (MBS) 1032
Barter
6.3
Tuktoyaktuk
3216
1013.0
6.7
990 SEA LEVEL PRESSURE (MBS) 1036
Cape Parry
19343
1013.3
6.9
987 SEA LEVEL PRESSURE (MBS) 1034
Clinton Point
4453
1014.2
6.6
990 SEA LEVEL PRESSURE (MBS) 1034
Holman
3214
1014.0
6.7

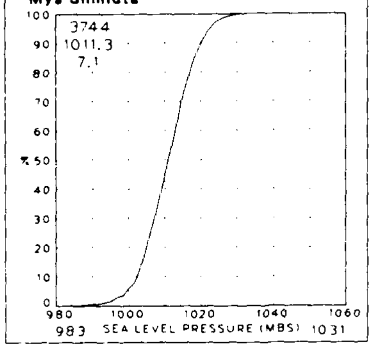


10 Mean Sea Level Pressure and Vector Mean Wind **July**

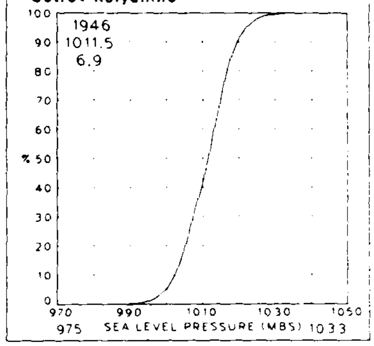
Ostrov Vrangelja



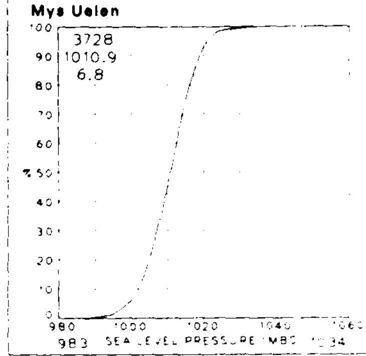
Mys Shmidta



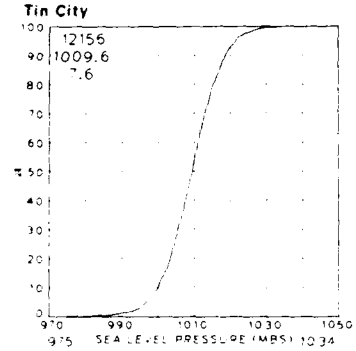
Ostrov Kolychino



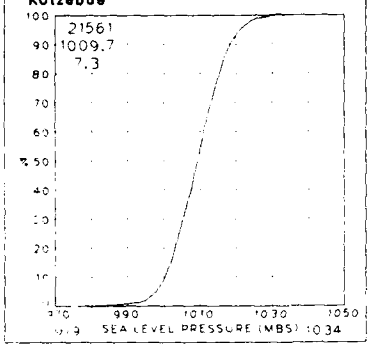
Mys Uelen



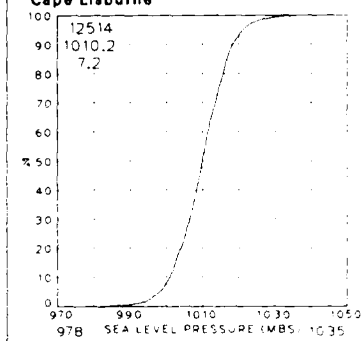
Tin City



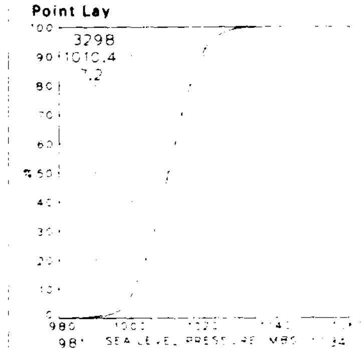
Kotzebue



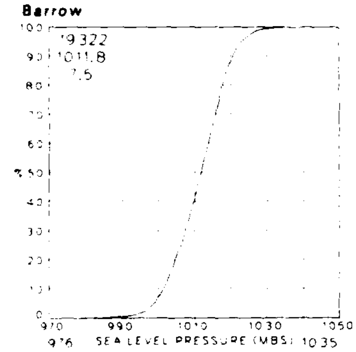
Cape Lisburne



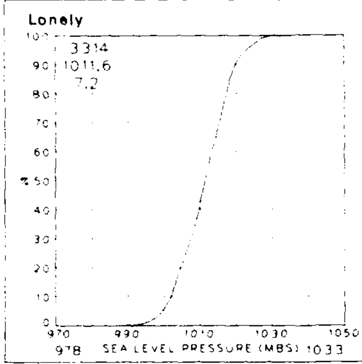
Point Lay



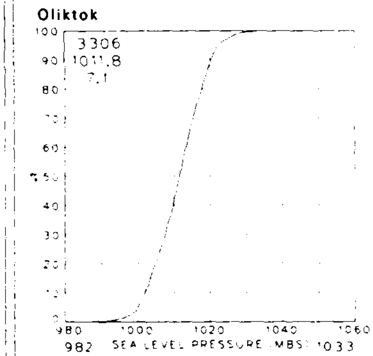
Barrow



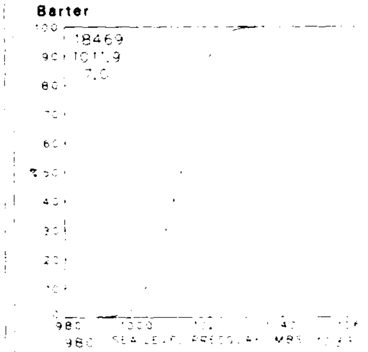
Lonely



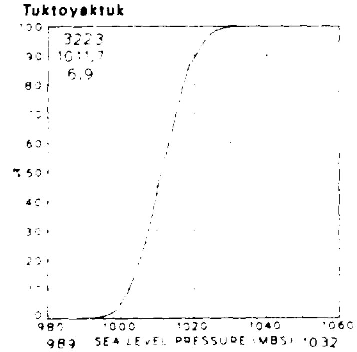
Oliktok



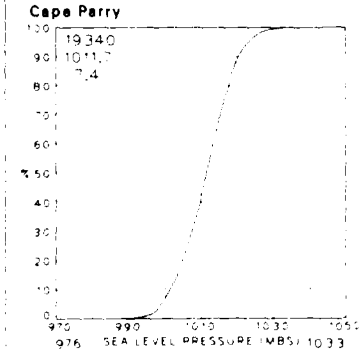
Barter



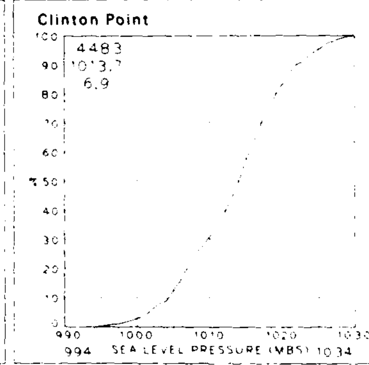
Tuktoyaktuk



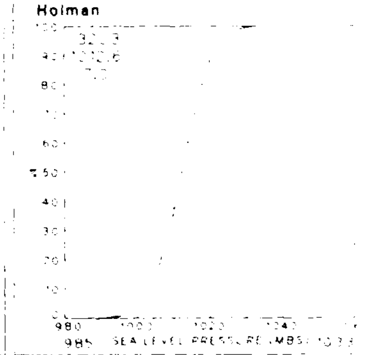
Cape Parry

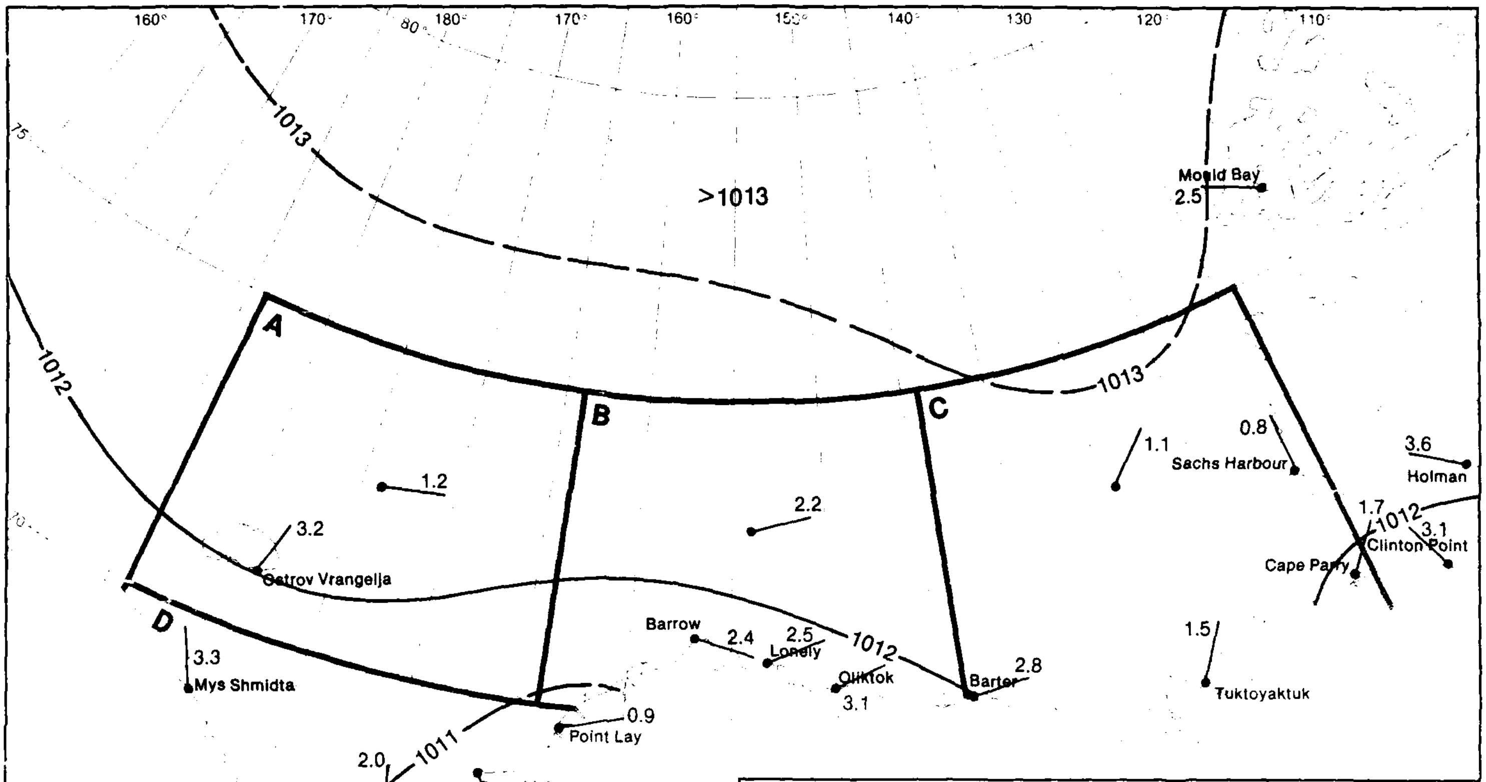


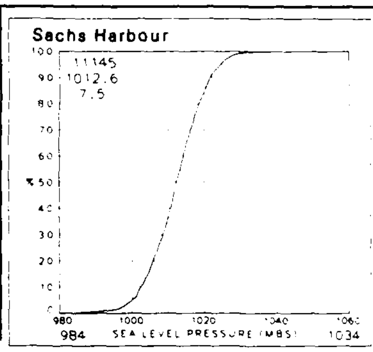
Clinton Point

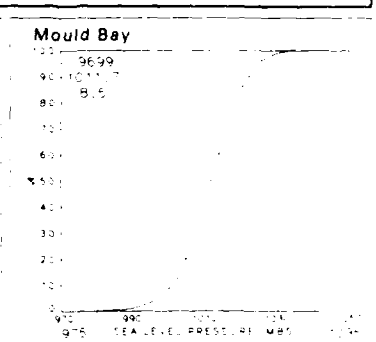


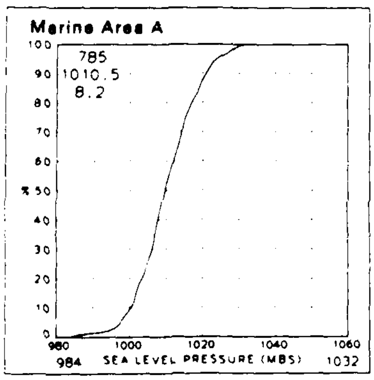
Holman

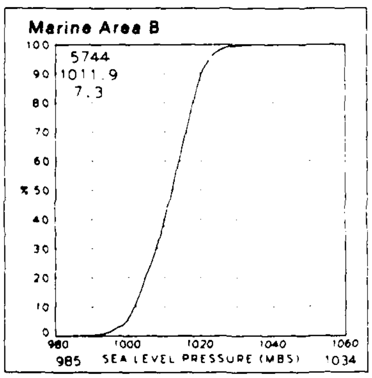


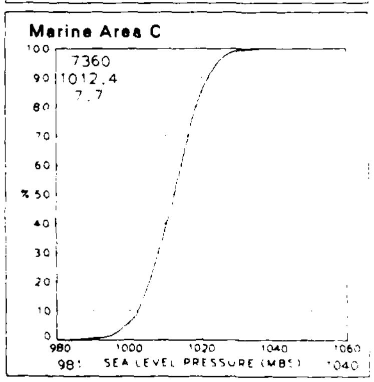


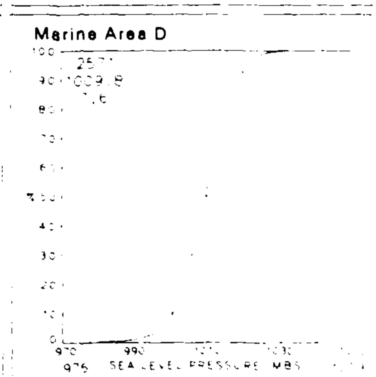






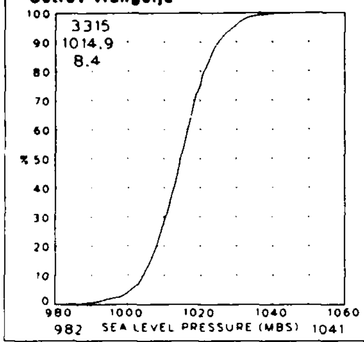




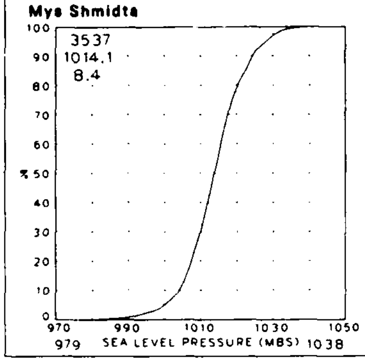


10 Mean Sea Level Pressure and Vector Mean Wind **August**

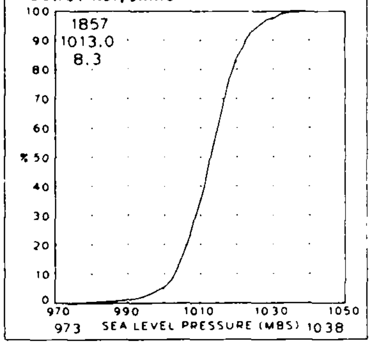
Ostrov Vrangelja



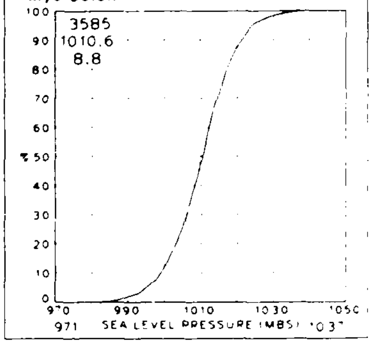
Mys Shmidta



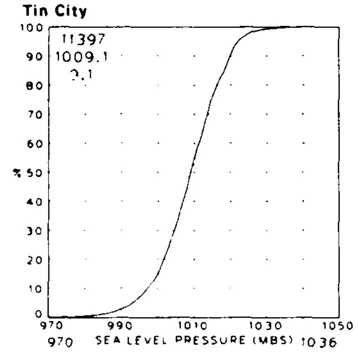
Ostrov Kolychino



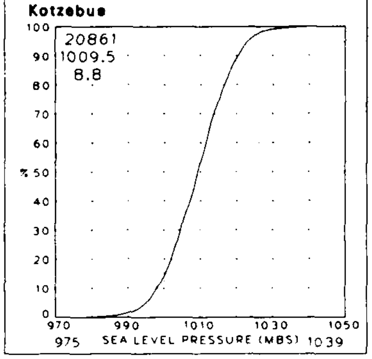
Mys Uelen



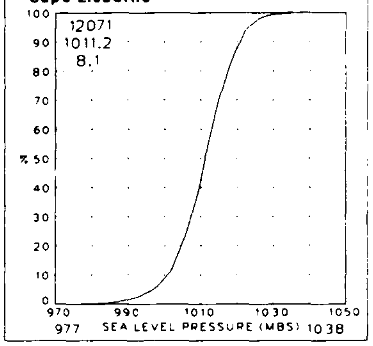
Tin City



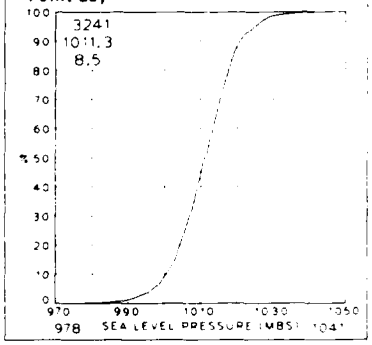
Kotzebue



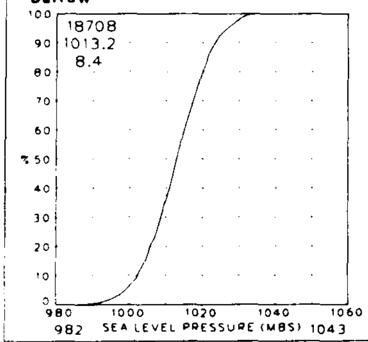
Cape Lisburne



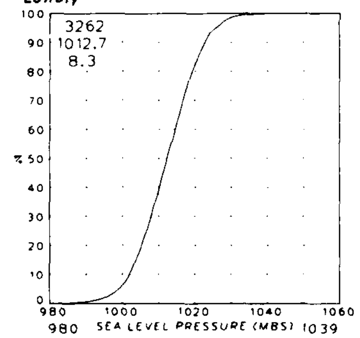
Point Lay



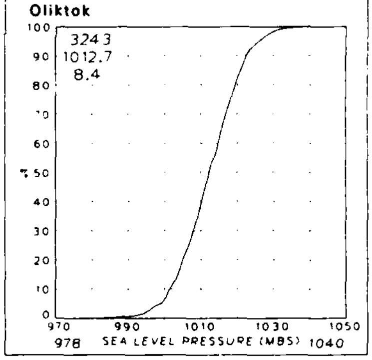
Barrow



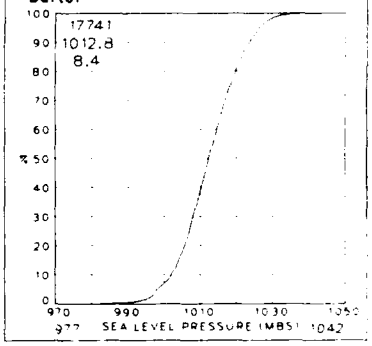
Lonely



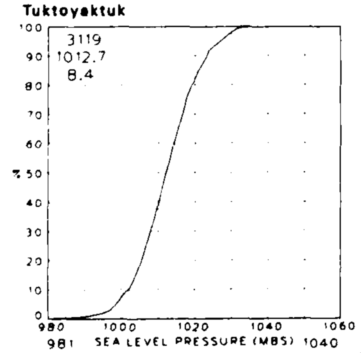
Oliktok



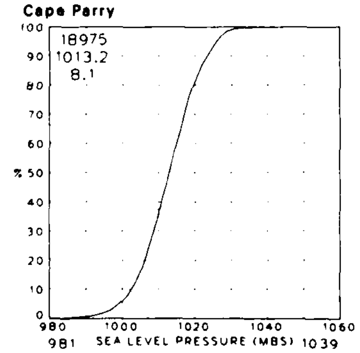
Barter



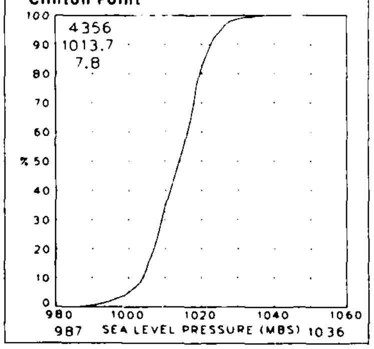
Tuktoyaktuk



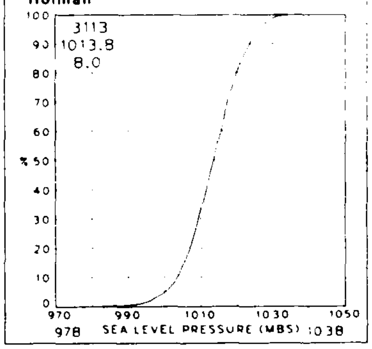
Cape Parry

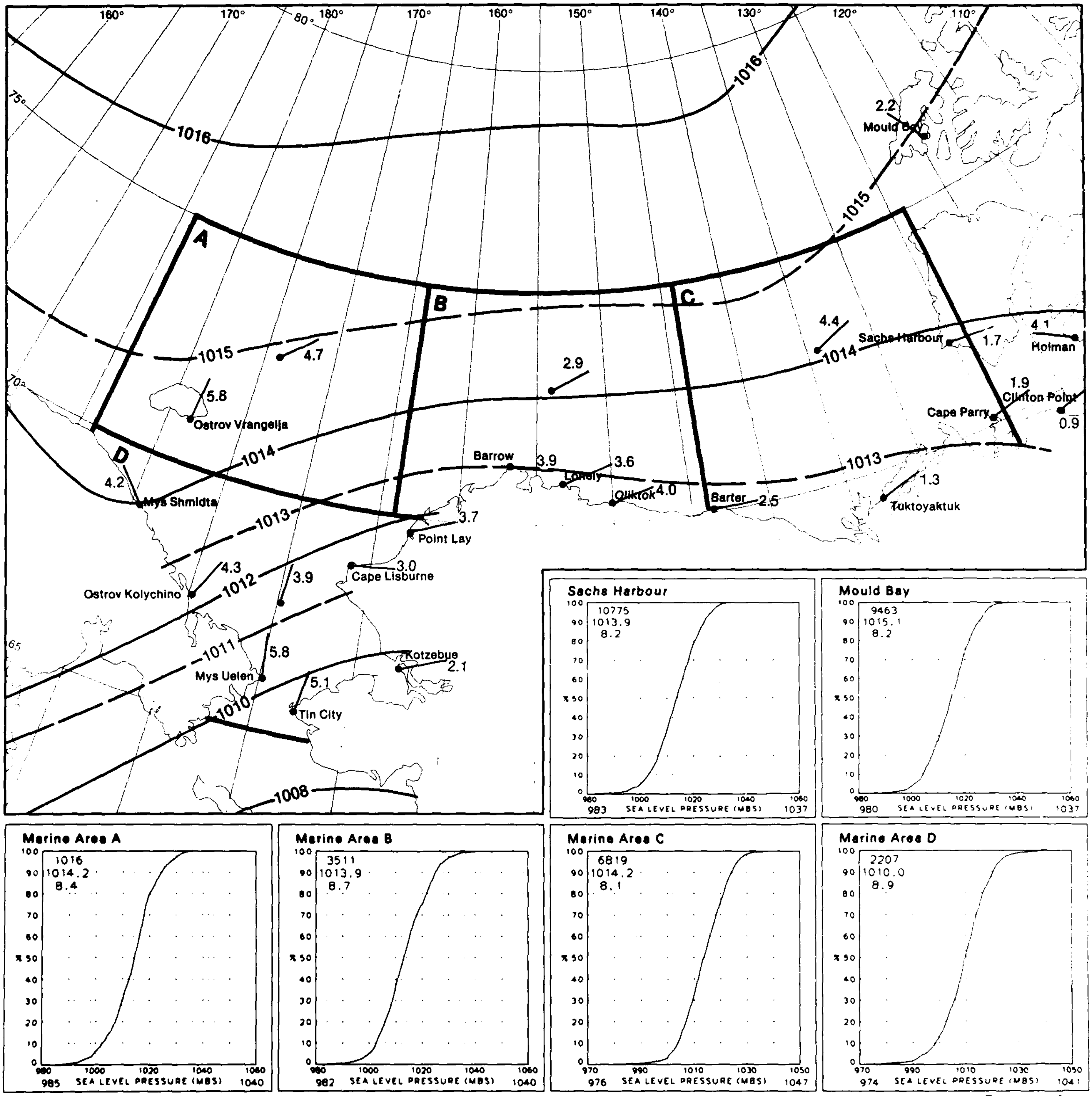


Clinton Point

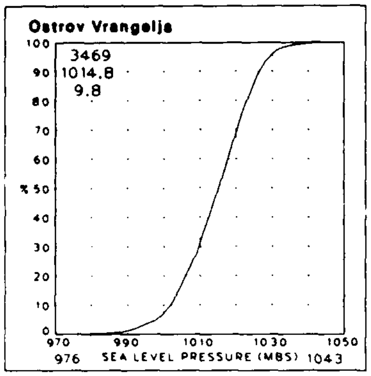


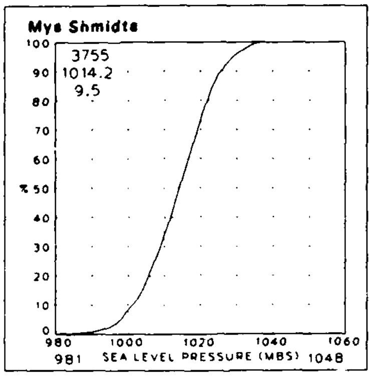
Holman

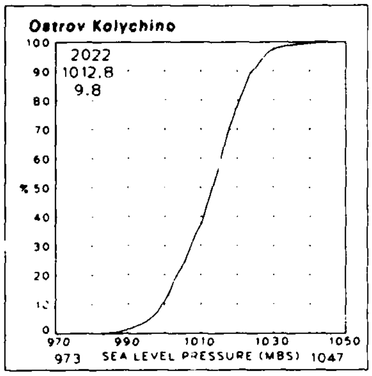


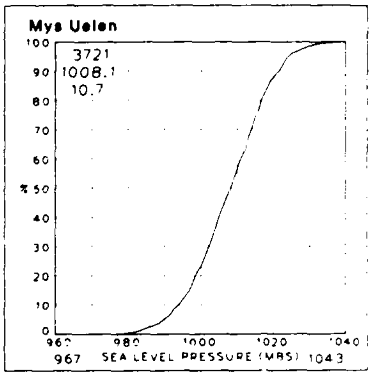


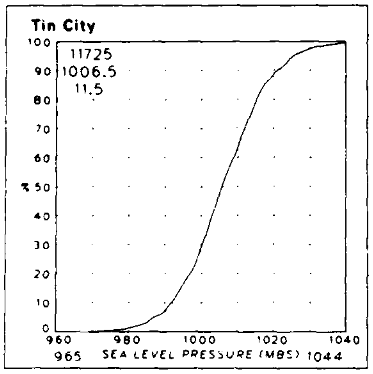
10 Mean Sea Level Pressure and Vector Mean Wind **September**

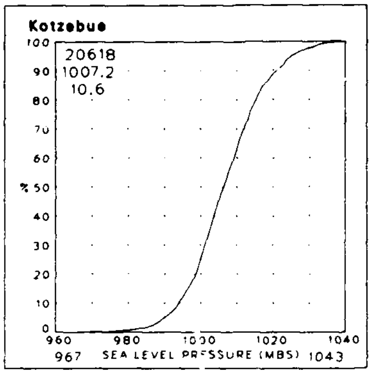

Ostrov Vrangelja
3469
1014.8
9.8
970 990 1010 1030 1050
976 SEA LEVEL PRESSURE (MBS) 1043

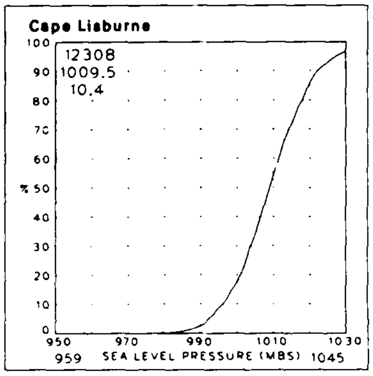

Mys Shmidta
3755
1014.2
9.5
980 1000 1020 1040 1060
981 SEA LEVEL PRESSURE (MBS) 1048

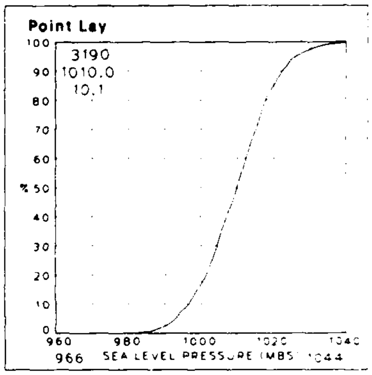

Ostrov Kolychino
2022
1012.8
9.8
970 990 1010 1030 1050
973 SEA LEVEL PRESSURE (MBS) 1047

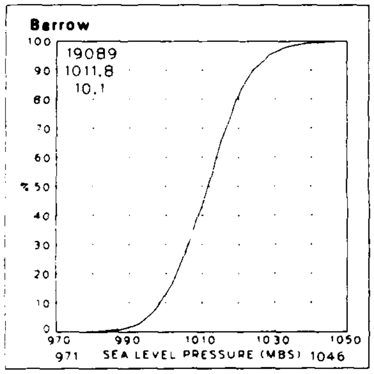

Mys Uelen
3721
1008.1
10.7
960 980 1000 1020 1040
967 SEA LEVEL PRESSURE (MBS) 1043

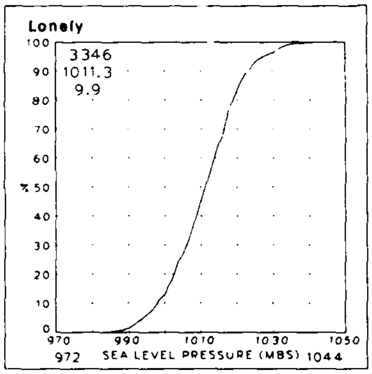

Tin City
11725
1006.5
11.5
960 980 1000 1020 1040
965 SEA LEVEL PRESSURE (MBS) 1044

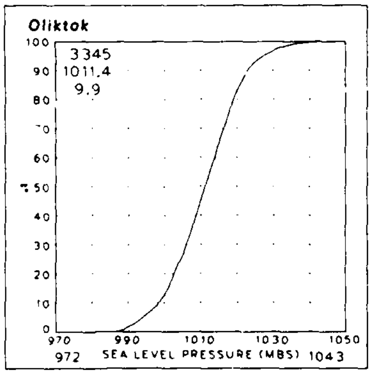

Kotzebue
20618
1007.2
10.6
960 980 1000 1020 1040
967 SEA LEVEL PRESSURE (MBS) 1043

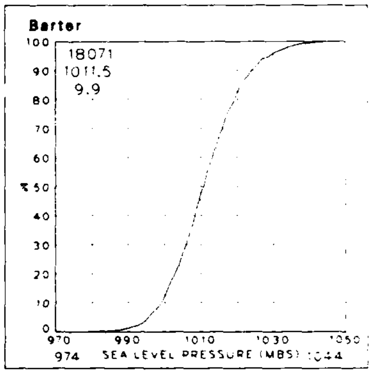

Cape Lisburne
12308
1009.5
10.4
950 970 990 1010 1030
959 SEA LEVEL PRESSURE (MBS) 1045

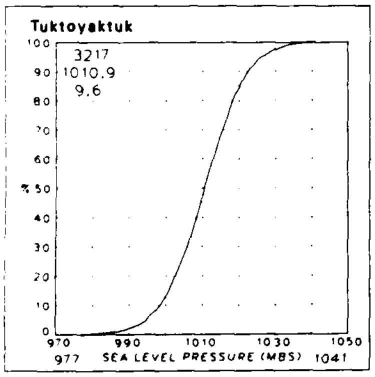

Point Lay
3190
1010.0
10.1
960 980 1000 1020 1040
966 SEA LEVEL PRESSURE (MBS) 1044

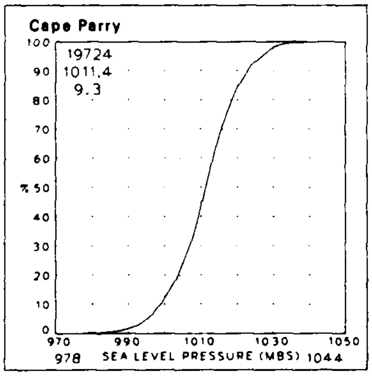

Barrow
19089
1011.8
10.1
970 990 1010 1030 1050
971 SEA LEVEL PRESSURE (MBS) 1046

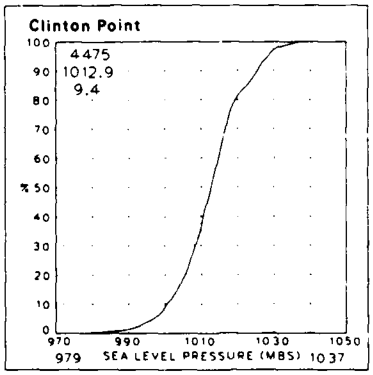

Lonely
3346
1011.3
9.9
970 990 1010 1030 1050
972 SEA LEVEL PRESSURE (MBS) 1044

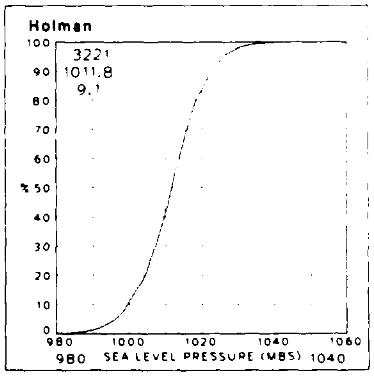

Oliktok
3345
1011.4
9.9
970 990 1010 1030 1050
972 SEA LEVEL PRESSURE (MBS) 1043

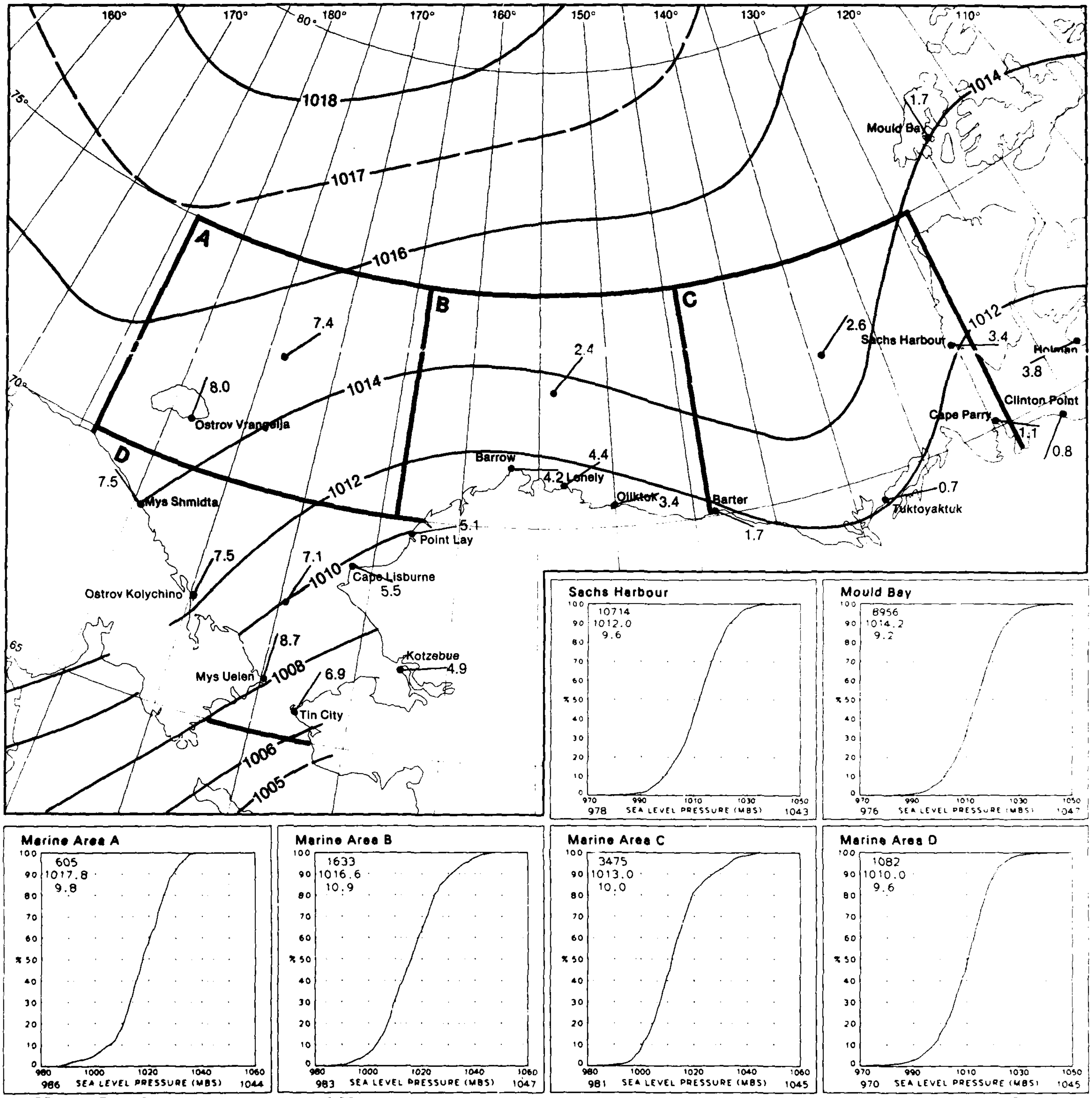

Barter
18071
1011.5
9.9
970 990 1010 1030 1050
974 SEA LEVEL PRESSURE (MBS) 1044


Tuktoyaktuk
3217
1010.9
9.6
970 990 1010 1030 1050
977 SEA LEVEL PRESSURE (MBS) 1041

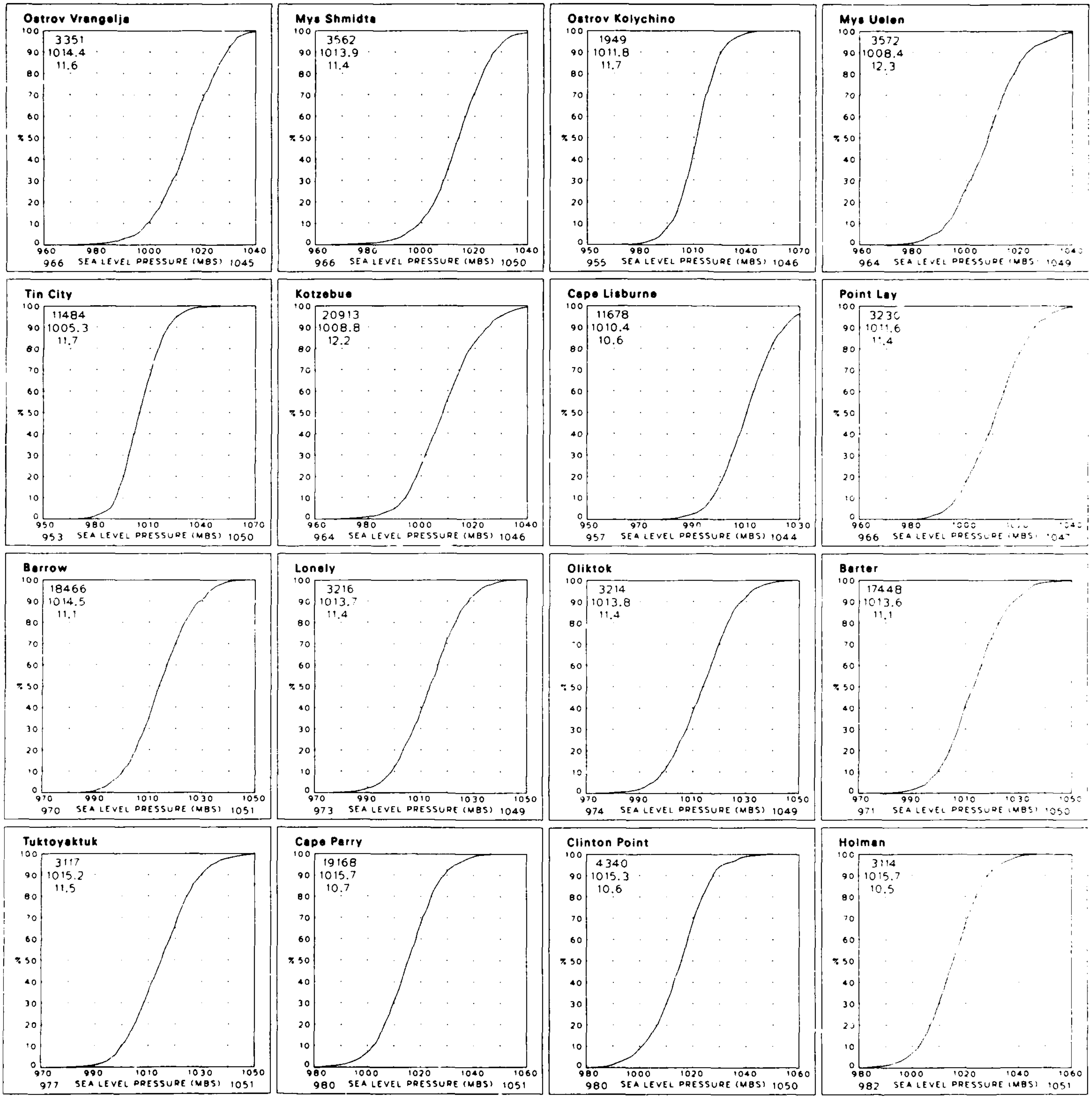

Cape Parry
19724
1011.4
9.3
970 990 1010 1030 1050
978 SEA LEVEL PRESSURE (MBS) 1044

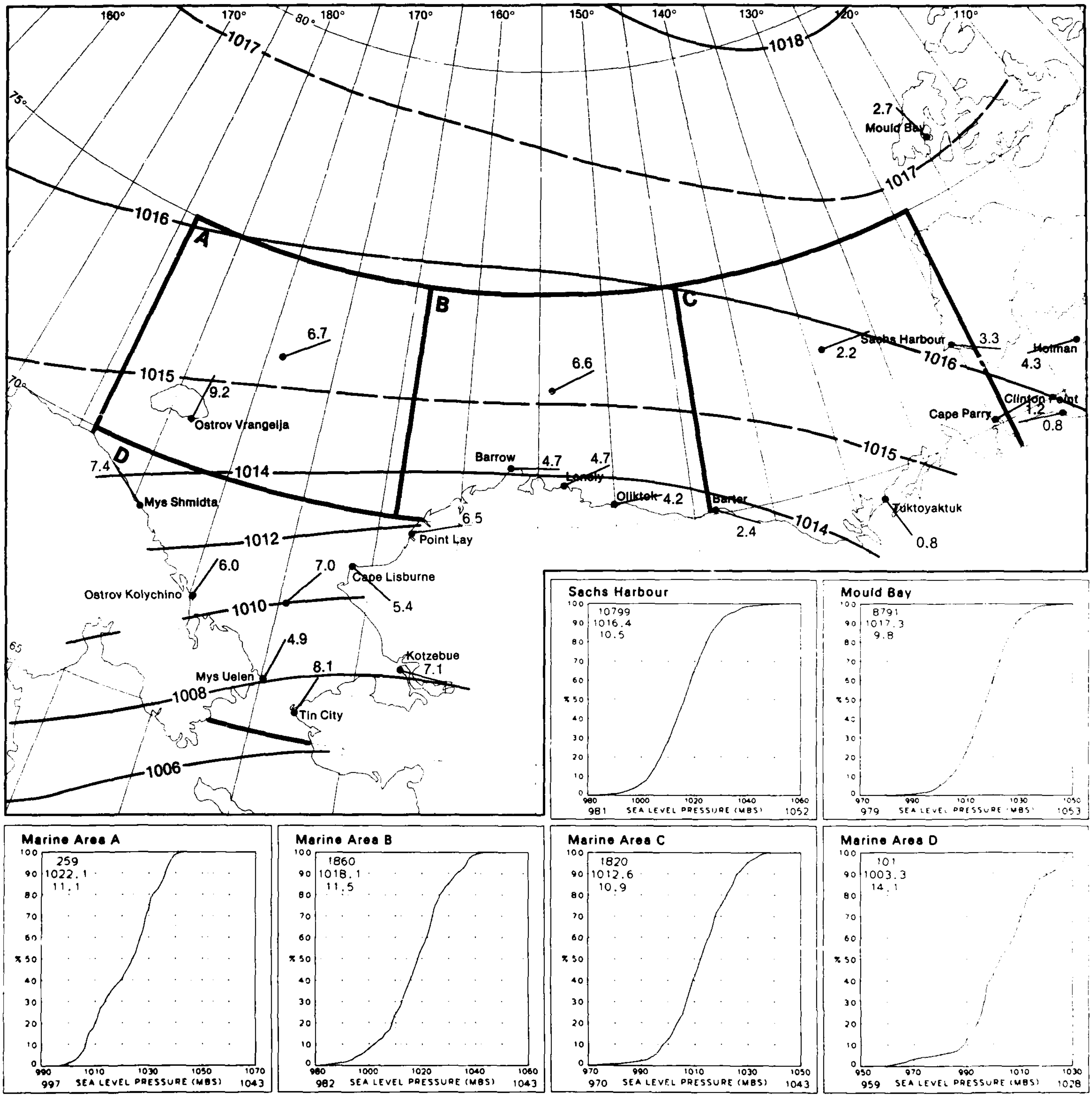

Clinton Point
4475
1012.9
9.4
970 990 1010 1030 1050
979 SEA LEVEL PRESSURE (MBS) 1037


Holman
3221
1011.8
9.1
980 1000 1020 1040 1060
980 SEA LEVEL PRESSURE (MBS) 1040

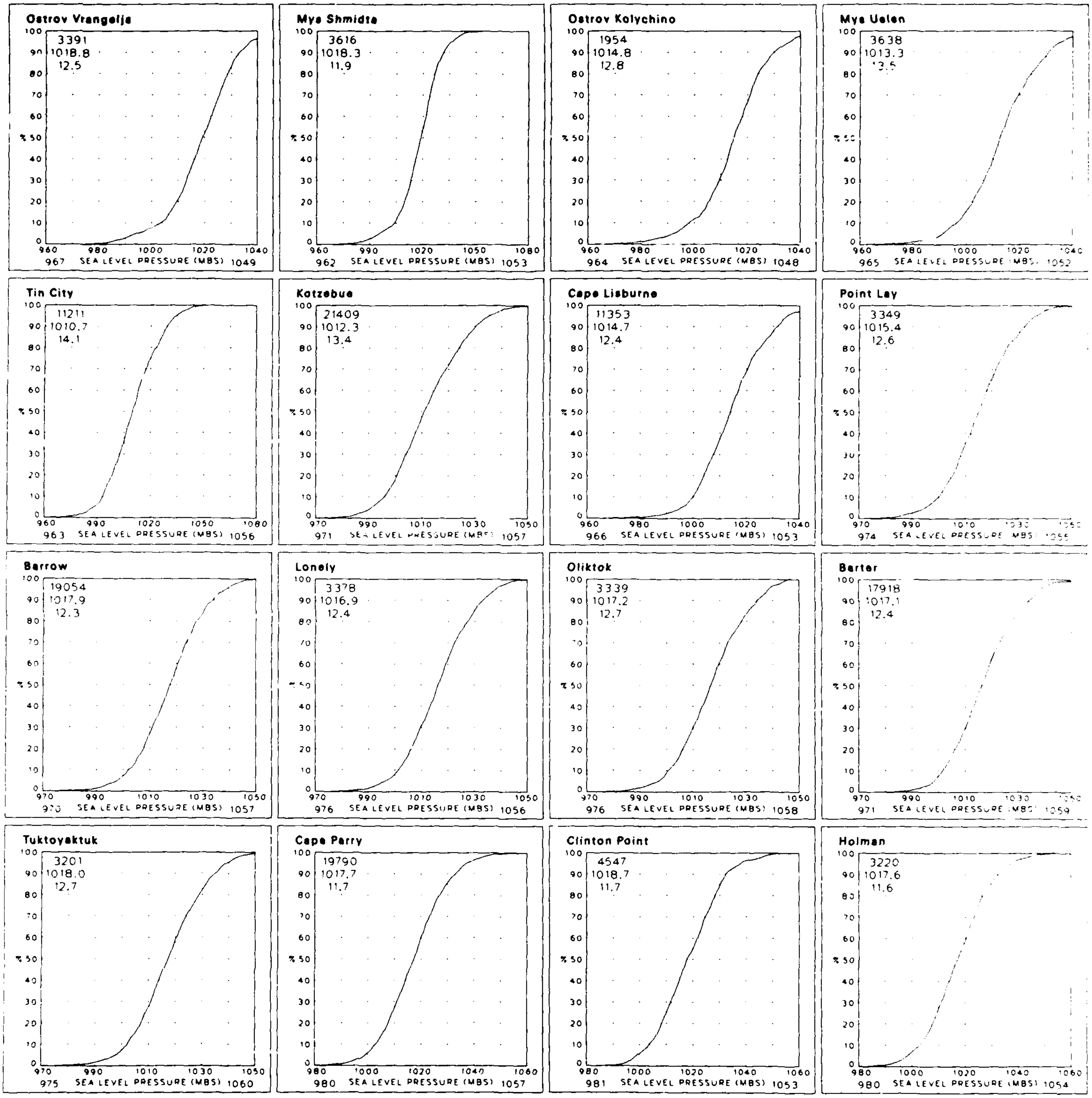


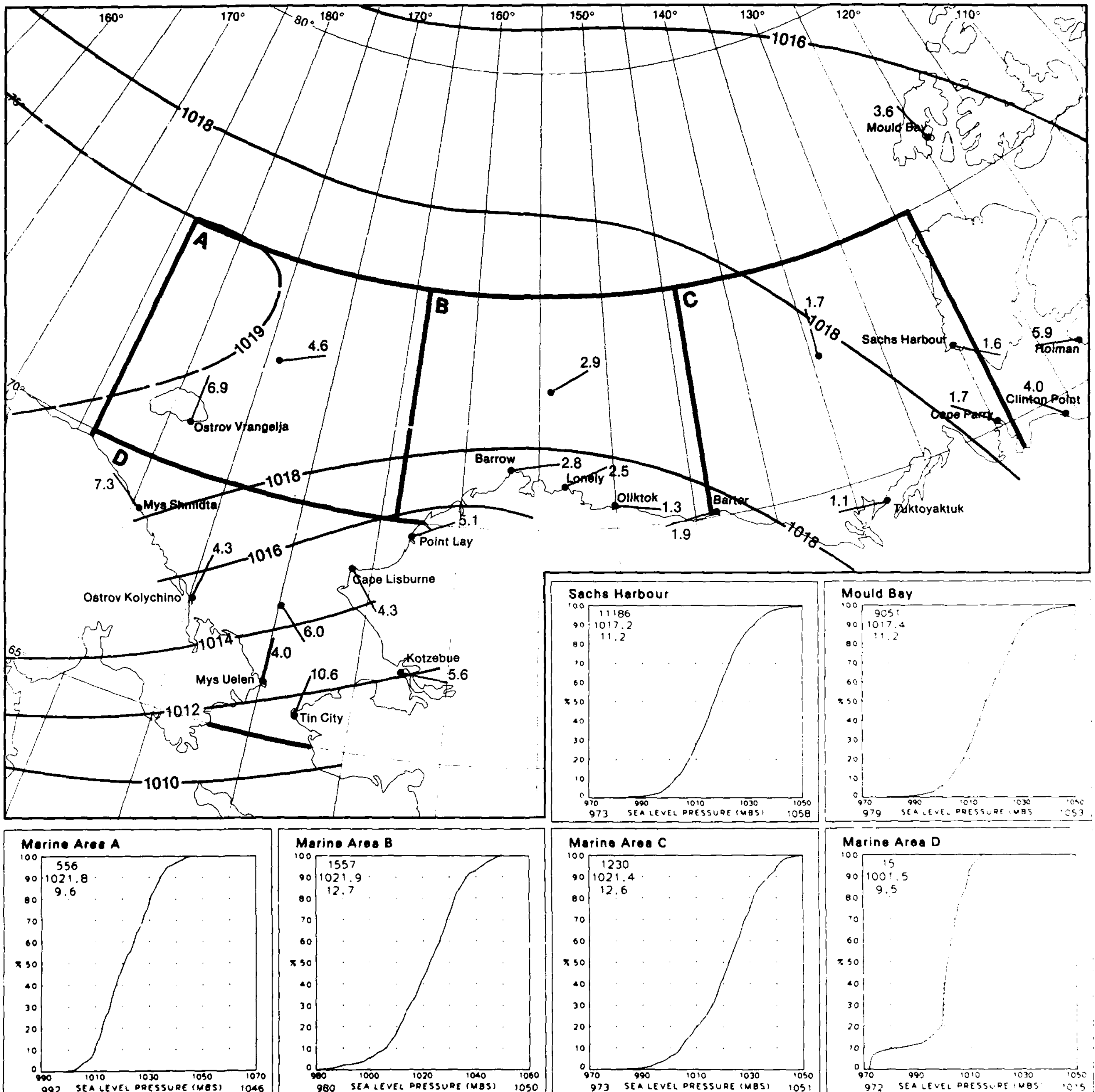
10 Mean Sea Level Pressure and Vector Mean Wind **October**


Ostrov Vrangelja
3351
1014.4
11.6
966 SEA LEVEL PRESSURE (MBS) 1045
Mys Shmidta
3562
1013.9
11.4
966 SEA LEVEL PRESSURE (MBS) 1050
Ostrov Kolychino
1949
1011.8
11.7
955 SEA LEVEL PRESSURE (MBS) 1046
Mys Uelen
3572
1008.4
12.3
964 SEA LEVEL PRESSURE (MBS) 1049
Tin City
11484
1005.3
11.7
953 SEA LEVEL PRESSURE (MBS) 1050
Kotzebue
20913
1008.8
12.2
964 SEA LEVEL PRESSURE (MBS) 1046
Cape Lisburne
11678
1010.4
10.6
957 SEA LEVEL PRESSURE (MBS) 1044
Point Lay
966 SEA LEVEL PRESSURE (MBS)
Barrow
18466
1014.5
11.1
970 SEA LEVEL PRESSURE (MBS) 1051
Lonely
3216
11.4
973 SEA LEVEL PRESSURE (MBS) 1049
Oliktok
3214
1013.8
11.4
974 SEA LEVEL PRESSURE (MBS) 1049
Barter
17448
1013.6
11.1
971 SEA LEVEL PRESSURE (MBS)
Tuktoyaktuk
3117
1015.2
11.5
977 SEA LEVEL PRESSURE (MBS) 1051
Cape Parry
19168
1015.7
10.7
980 SEA LEVEL PRESSURE (MBS) 1051
Clinton Point
4340
1015.3
10.6
980 SEA LEVEL PRESSURE (MBS) 1050
Holman
3114
1015.7
10.5
982 SEA LEVEL PRESSURE (MBS) 1051



10 Mean Sea Level Pressure and Vector Mean Wind **November**


Ostrov Vrangelja
3391
1018.8
12.5
967 SEA LEVEL PRESSURE (MBS) 1049
Mys Shmidta
3616
1018.3
11.9
962 SEA LEVEL PRESSURE (MBS) 1053
Ostrov Kolychino
1954
1014.8
12.8
964 SEA LEVEL PRESSURE (MBS) 1048
Mys Uelen
3638
1013.3
965 SEA LEVEL PRESSURE (MBS) 1052
Tin City
11211
1010.7
14.1
963 SEA LEVEL PRESSURE (MBS) 1056
Kotzebue
21409
1012.3
13.4
971 SEA LEVEL PRESSURE 1057
Cape Lisburne
11353
1014.7
12.4
966 SEA LEVEL PRESSURE (MBS) 1053
Point Lay
3349
1015.4
12.6
974 SEA LEVEL PRESSURE
Barrow
19054
1017.9
12.3
SEA LEVEL PRESSURE (MBS) 1057
Lonely
3378
1016.9
12.4
976 SEA LEVEL PRESSURE (MBS) 1056
Oliktok
3339
1017.2
12.7
976 SEA LEVEL PRESSURE (MBS) 1058
Barter
17918
1017.1
12.4
971 SEA LEVEL PRESSURE 1059
Tuktoyaktuk
3201
1018.0
12.7
975 SEA LEVEL PRESSURE (MBS) 1060
Cape Parry
19790
1017.7
11.7
980 SEA LEVEL PRESSURE (MBS) 1057
Clinton Point
4547
1018.7
11.7
981 SEA LEVEL PRESSURE (MBS) 1053
Holman
3220
1017.6
11.6
980 SEA LEVEL PRESSURE (MBS) 1054



10 Mean Sea Level Pressure and Vector Mean Wind **December**

Map 11. Wind speed ≦10 and ≧34 knots

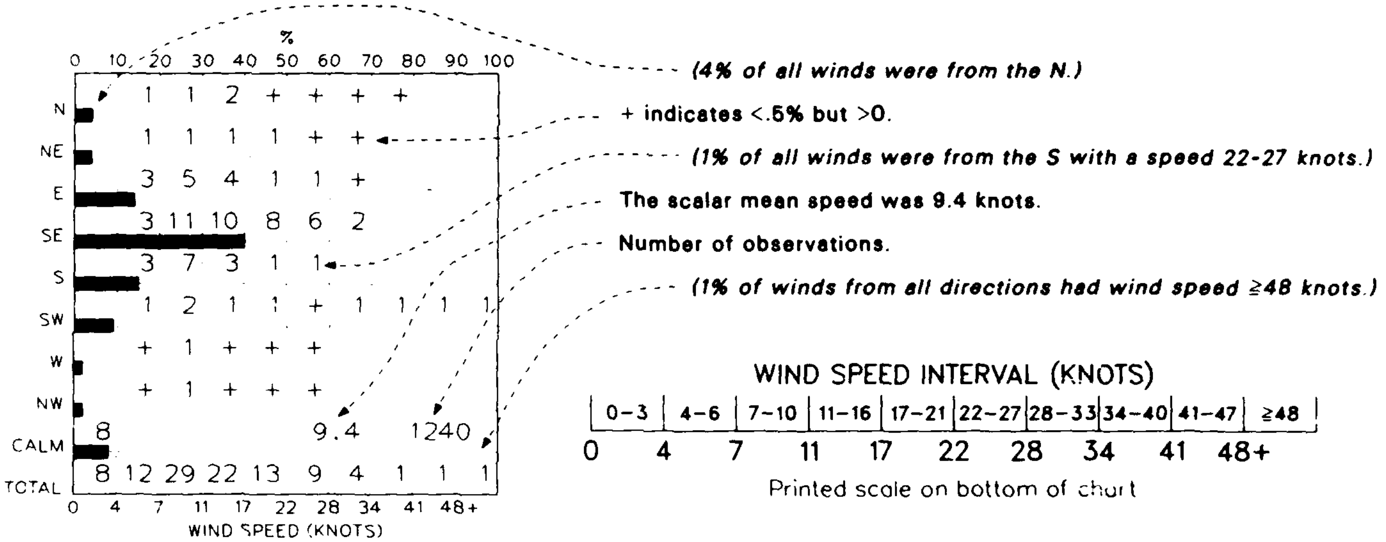
BLACK LINE – Percent frequency of wind speed ≦10 knots (≦12 mph).

BLUE LINE – Percent frequency of wind speed ≧34 knots (≧39 mph).

Albers Equal–Area Conic Projection

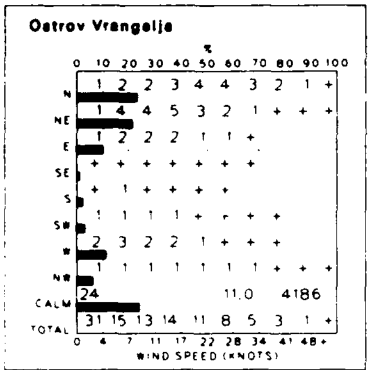
Graphs: Wind speed/direction

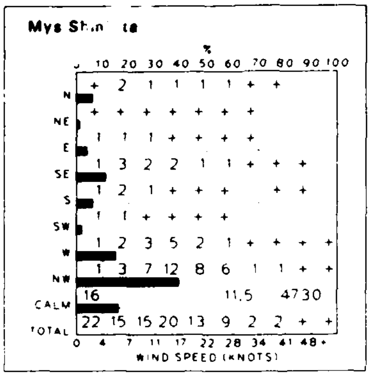
Direction frequency (top scale): Bars represent percent frequency of winds observed from each direction.
Speed frequency (bottom scale): Printed figures represent percent frequency of wind speeds observed from each direction.

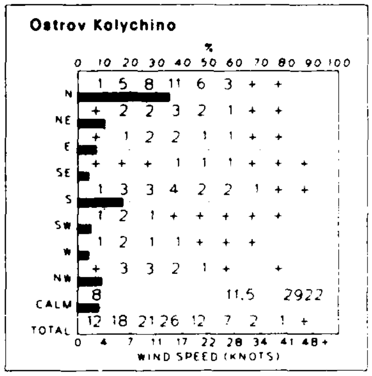


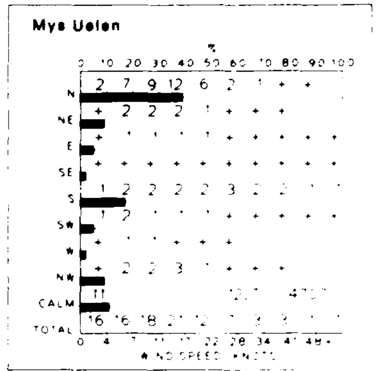
The scalar mean wind speed on the graph is based on the number of observations reporting a wind speed with direction. The sum of the TOTAL line provides the cumulative percent frequency of wind speed below a selected threshold value. In the legend graph, 71% of all winds were less than 17 knots (20 mph). The sum of the percent frequencies of the four wind speed isopleths for a given month and location on Map Sets 11 and 12 should equal 100%.

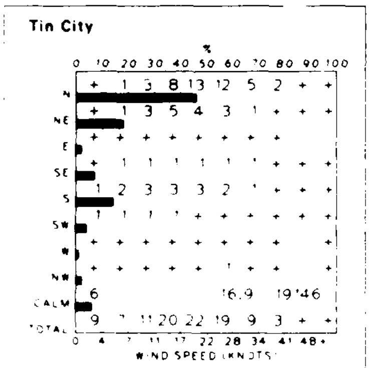
Surface wind is one of the most commonly observed elements. Many of the observations from the NCDC data base are visual observations based on the roughness of the sea (see table in text of Set 14). In recent years, more ships acquired anemometers and reported measured winds. Prior to 1963, many of the winds were recorded in the Beaufort scale; such estimates have proven to be quite reliable and can be used with a high degree of confidence.

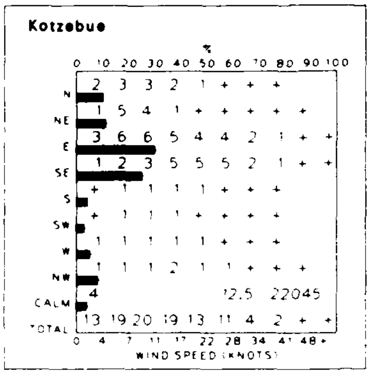

Ostrov Vrangelja

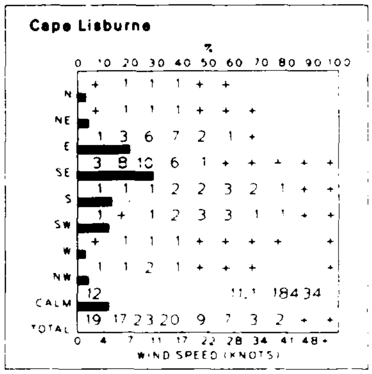

Mys Sh... (name partly illegible)

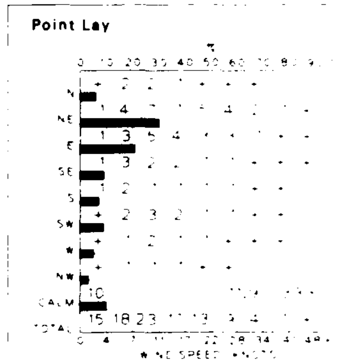

Ostrov Kolychino

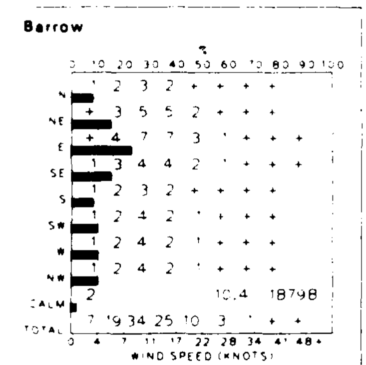

Mys Uelen

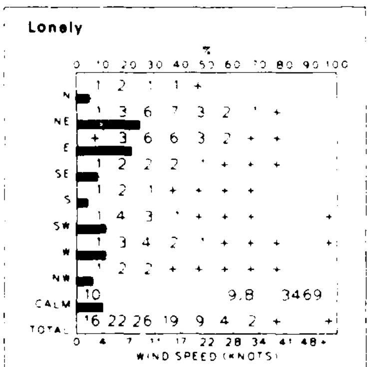

Tin City

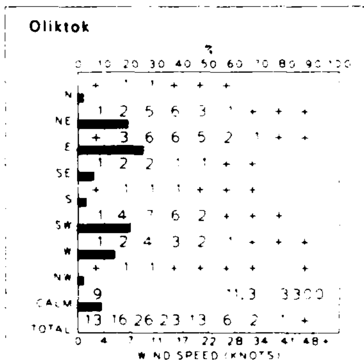

Kotzebue

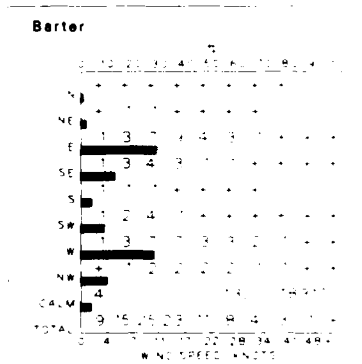

Cape Lisburne

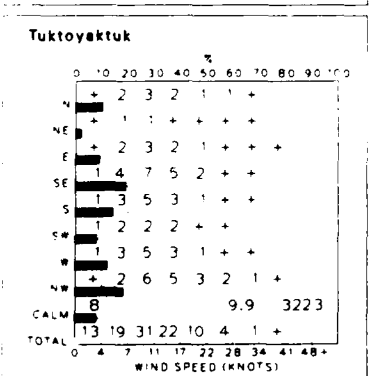

Point Lay

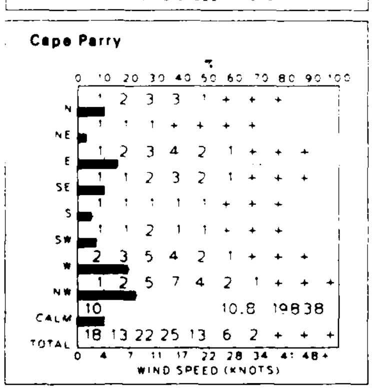

Barrow

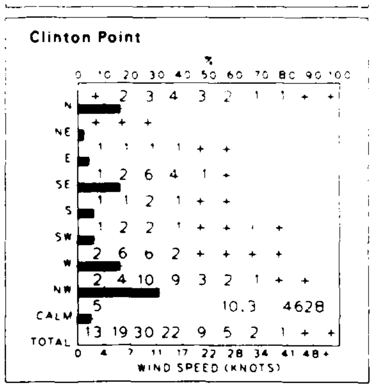

Lonely

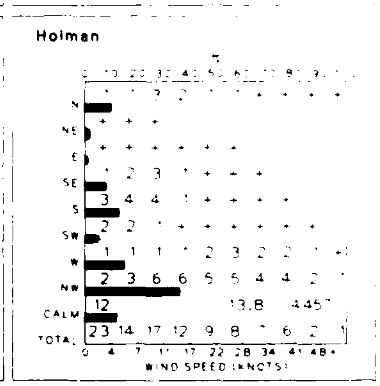

Oliktok

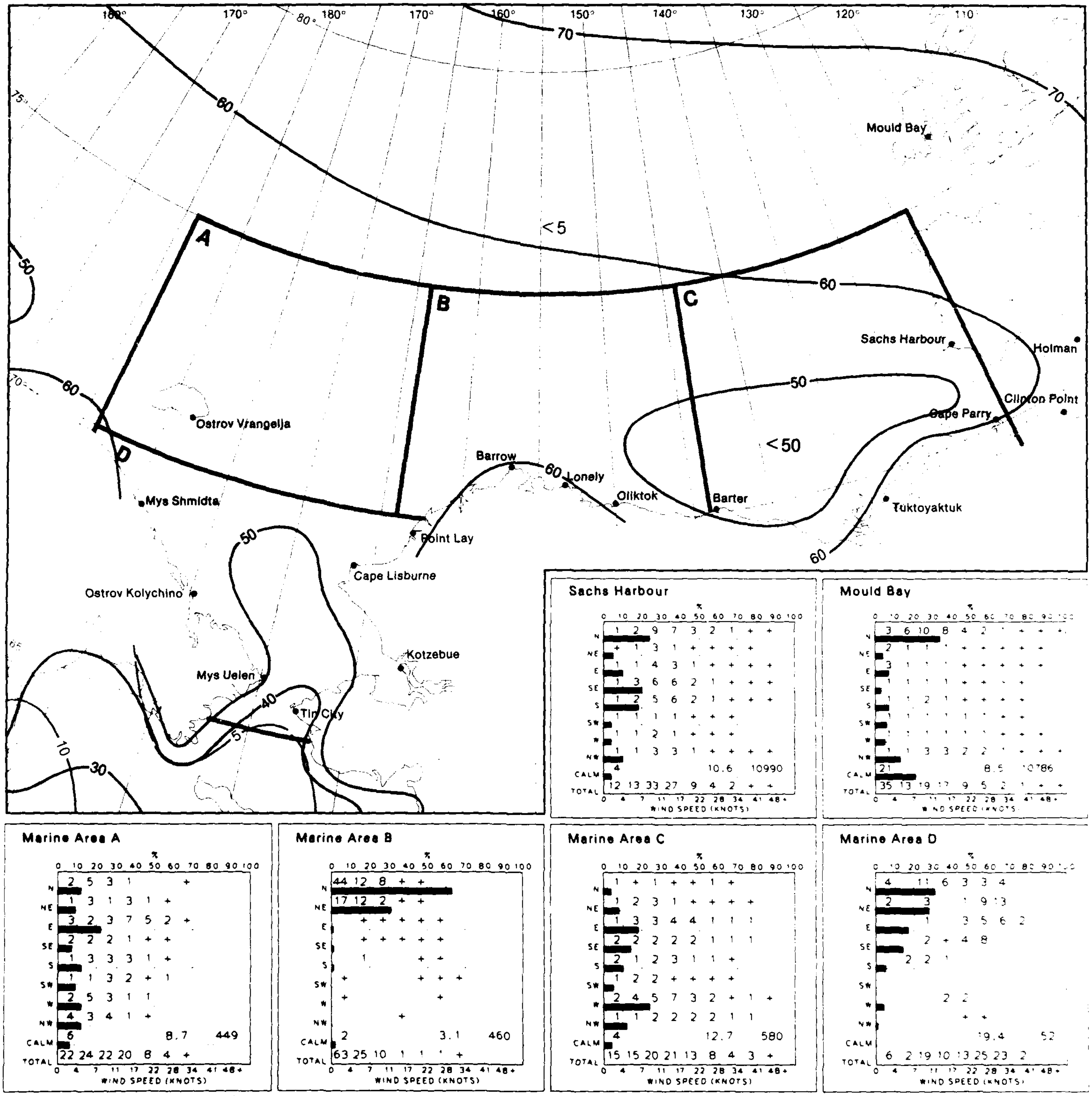

Barter


Tuktoyaktuk

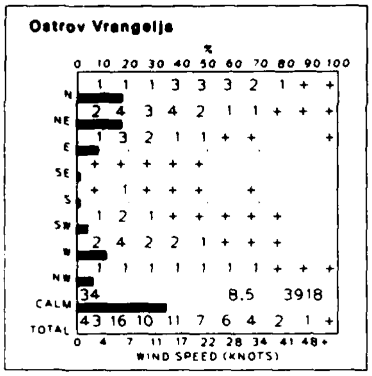

Cape Parry

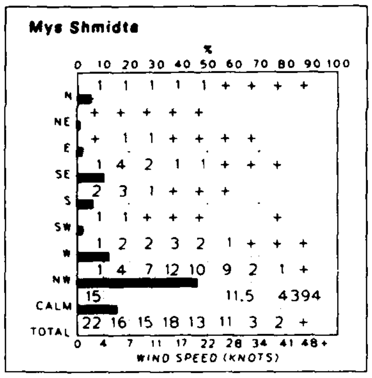

Clinton Point

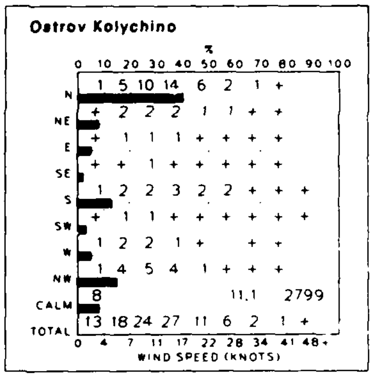

Holman

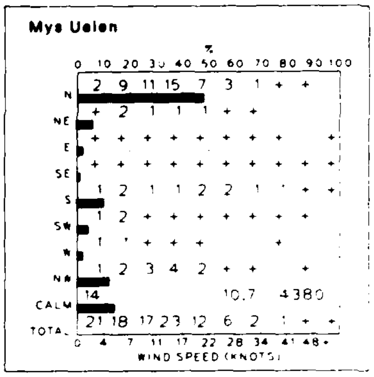


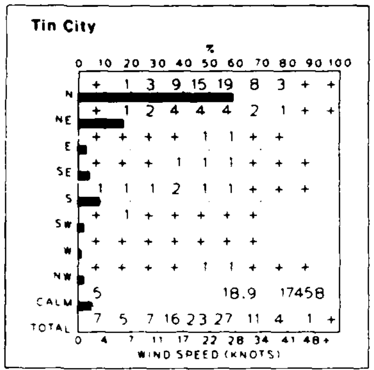
11 Wind Speed ≦10 and ≧34 Knots **January**

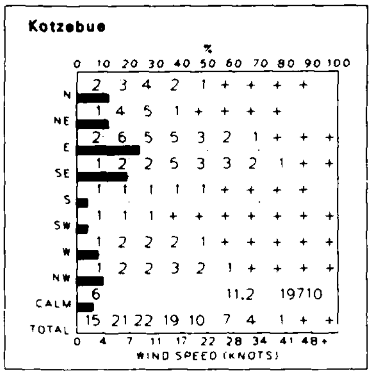

Ostrov Vrangelja
WIND SPEED (KNOTS)

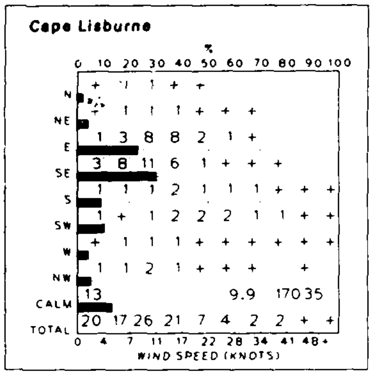

Mys Shmidta
WIND SPEED (KNOTS)

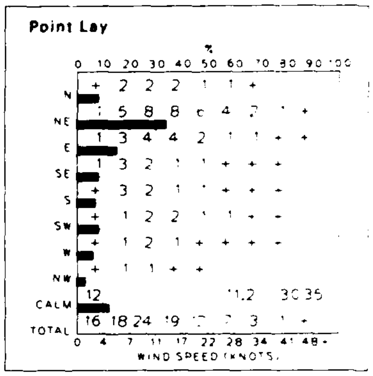

Ostrov Kolychino
WIND SPEED (KNOTS)

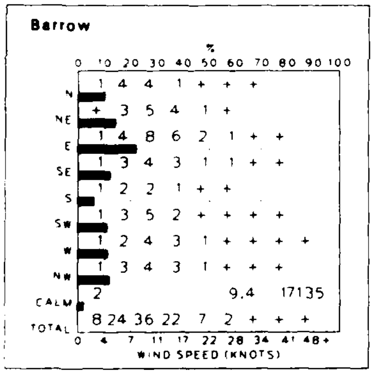

Mys Uelen
WIND SPEED (KNOTS)

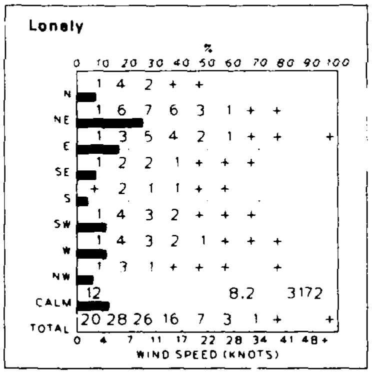

Tin City
WIND SPEED (KNOTS)

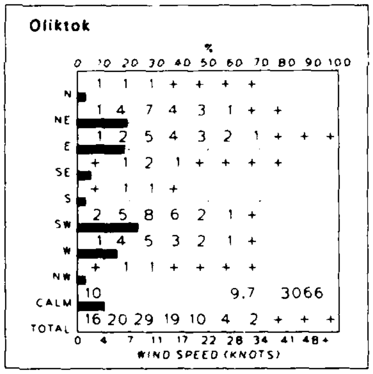

Kotzebue
WIND SPEED (KNOTS)

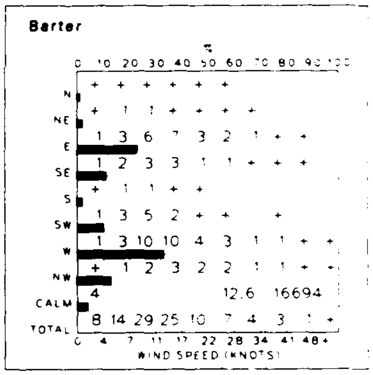

Cape Lisburne
WIND SPEED (KNOTS)

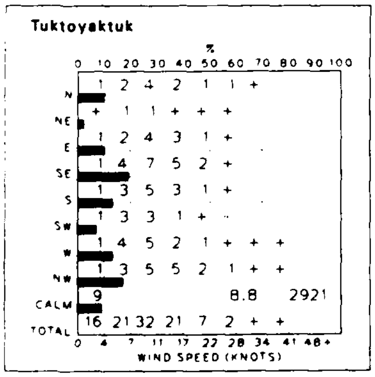

Point Lay
WIND SPEED (KNOTS)

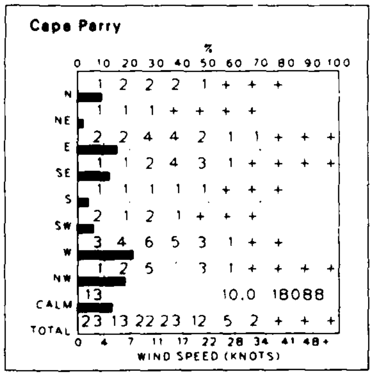

Barrow
WIND SPEED (KNOTS)

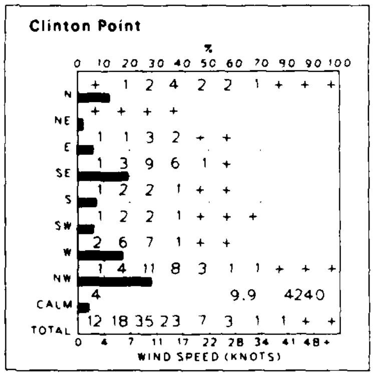

Lonely
WIND SPEED (KNOTS)

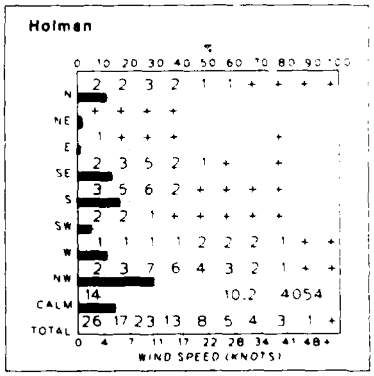

Oliktok
WIND SPEED (KNOTS)

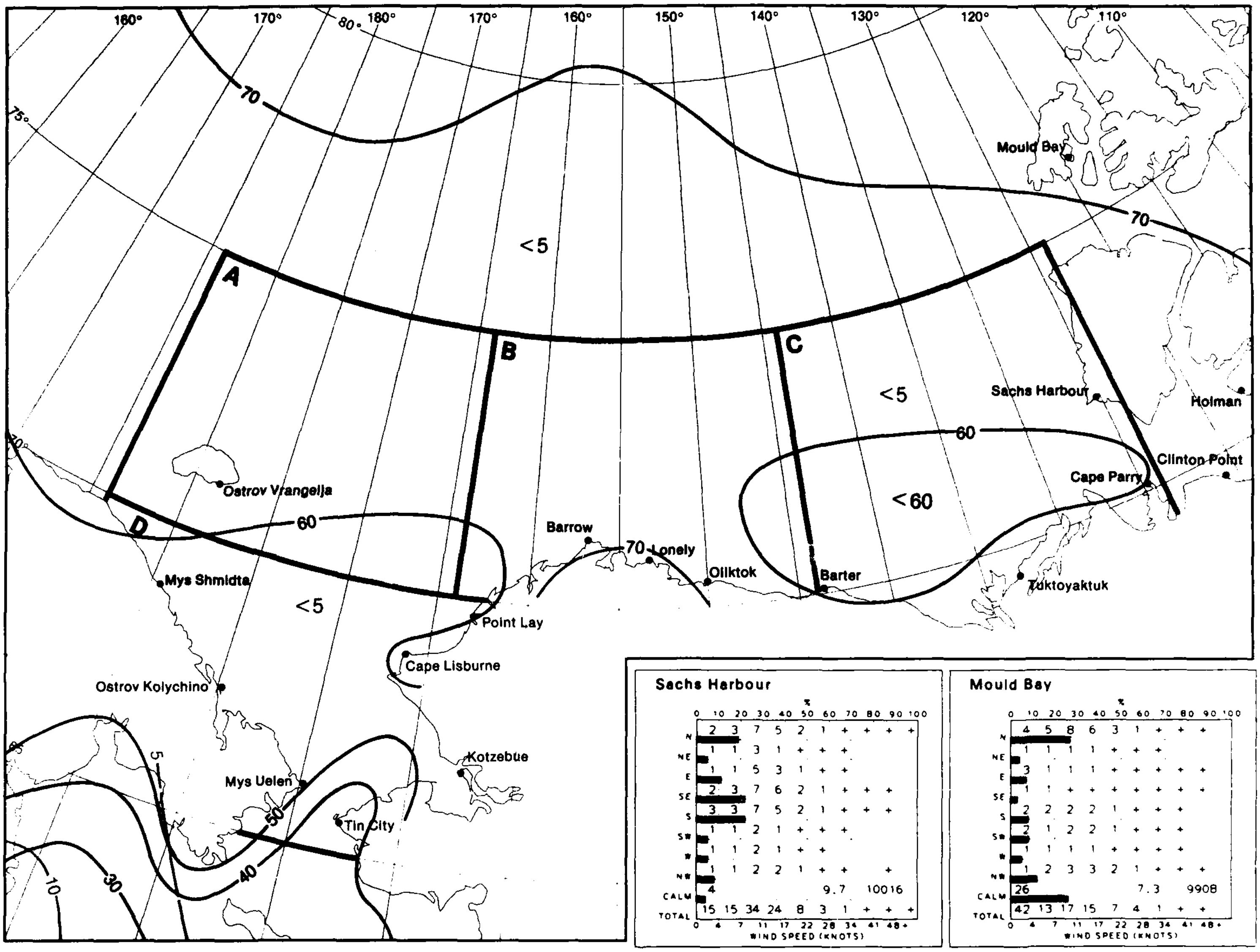

Barter
WIND SPEED (KNOTS)


Tuktoyaktuk
WIND SPEED (KNOTS)


Cape Parry
WIND SPEED (KNOTS)


Clinton Point
WIND SPEED (KNOTS)


Holman
WIND SPEED (KNOTS)



Sachs Harbour

% / Wind speed (knots)	0	4	7	11	17	22	28	34	41	48+
N	2	3	7	5	2	1	+	+	+	+
NE	1	1	3	1	+	+	+			
E	1	1	5	3	1	+	+			
SE	2	3	7	6	2	1	+	+	+	
S	3	3	7	5	2	1	+	+	+	
SW	1	1	2	1	+	+	+			
W	1	1	2	1	+	+				
NW	1	1	2	2	1	+	+		+	
CALM	4					9.7			10016	
TOTAL	15	15	34	24	8	3	1	+	+	+

Mould Bay

% / Wind speed (knots)	0	4	7	11	17	22	28	34	41	48+
N	4	5	8	6	3	1	+	+	+	
NE	1	1	1	1	+	+	+			
E	3	1	1	1	+	+	+	+	+	
SE	1	1	+	+	+	+	+	+	+	
S	2	2	2	2	1	+	+	+		
SW	2	1	2	2	1	+	+	+		
W	1	1	1	1	+	+	+	+		
NW	1	2	3	3	2	1	+	+	+	
CALM	26					7.3			9908	
TOTAL	42	13	17	15	7	4	1	+	+	

Marine Area A

% / Wind speed (knots)	0	4	7	11	17	22	28	34	41	48+
N	1	5	1	1			+			
NE	2	4	6	2	1	+				
E	2	4	5	7	1	1	+			
SE	2	2	3	2	1					
S	1	3	6	4						
SW	2	2	3	1	1	+				
W	1	3	2	3	3	1	+			
NW	2	3	2	+	1					
CALM	3					8.9			282	
TOTAL	16	26	27	20	8	2	1			

Marine Area B

% / Wind speed (knots)	0	4	7	11	17	22	28	34	41	48+
N	29	1	2	1		+				
NE	41	1	3	2	+	1				
E		+	1	1	1	1				
SE		+	+		+	+				
S										
SW	+	+	1			+				
W		1	1	1	+					
NW		+	2	1						
CALM	3					3.1			262	
TOTAL	74	4	10	6	2	3				

Marine Area C

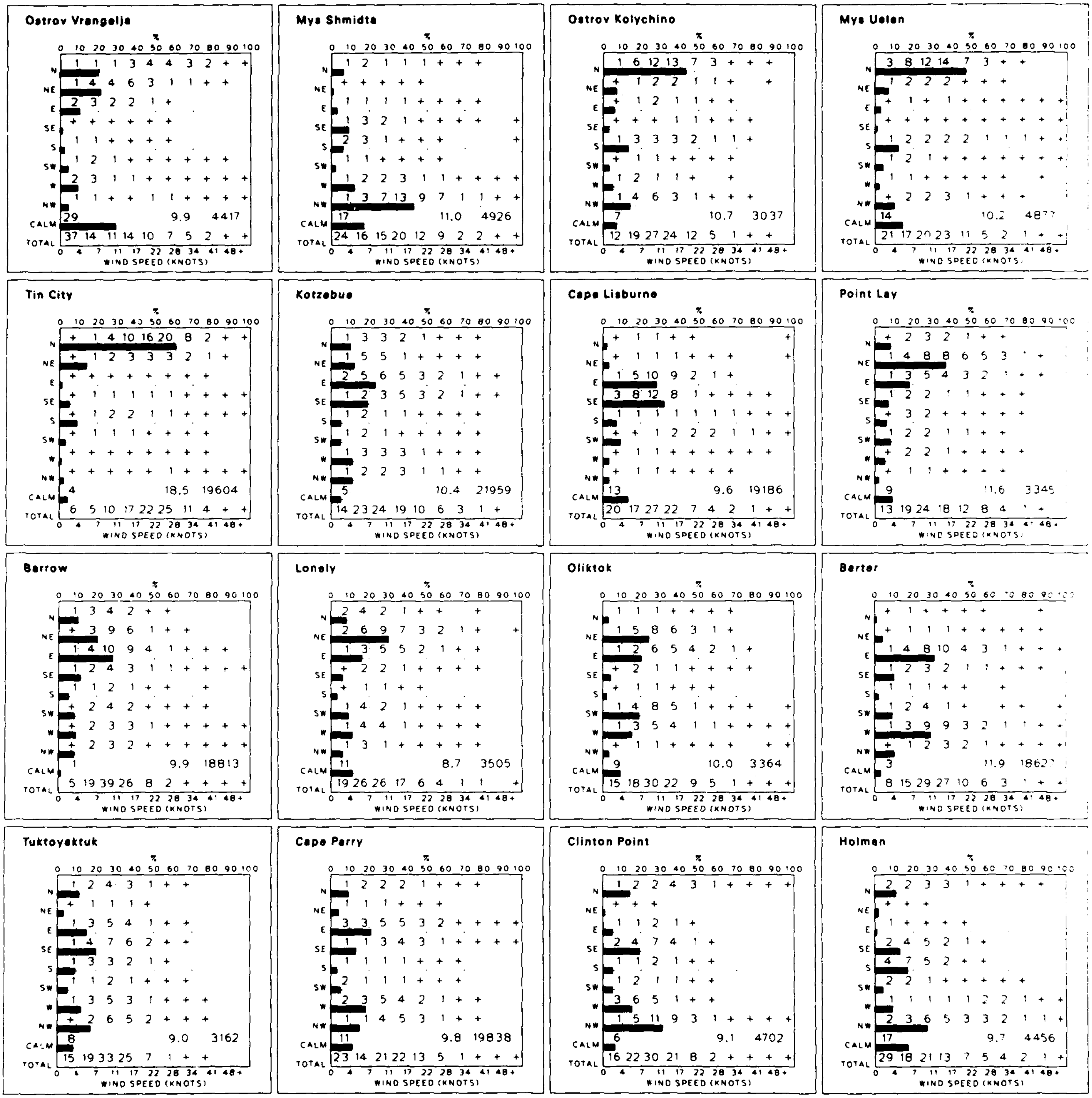
% / Wind speed (knots)	0	4	7	11	17	22	28	34	41	48+
N	+	2	3	1				+		
NE	+	3	1	1	1	1	+			
E	1	3	3	5	8	3	+			
SE	+	4	3	1	3	+	+			
S	1	3	3	3	1	+	+			
SW	+	2	4	2	+	+	+			
W	1	3	3	6	2	1				
NW		2	3	2	+					
CALM	8					11.0			346	
TOTAL	11	21	23	22	15	7	1	+		

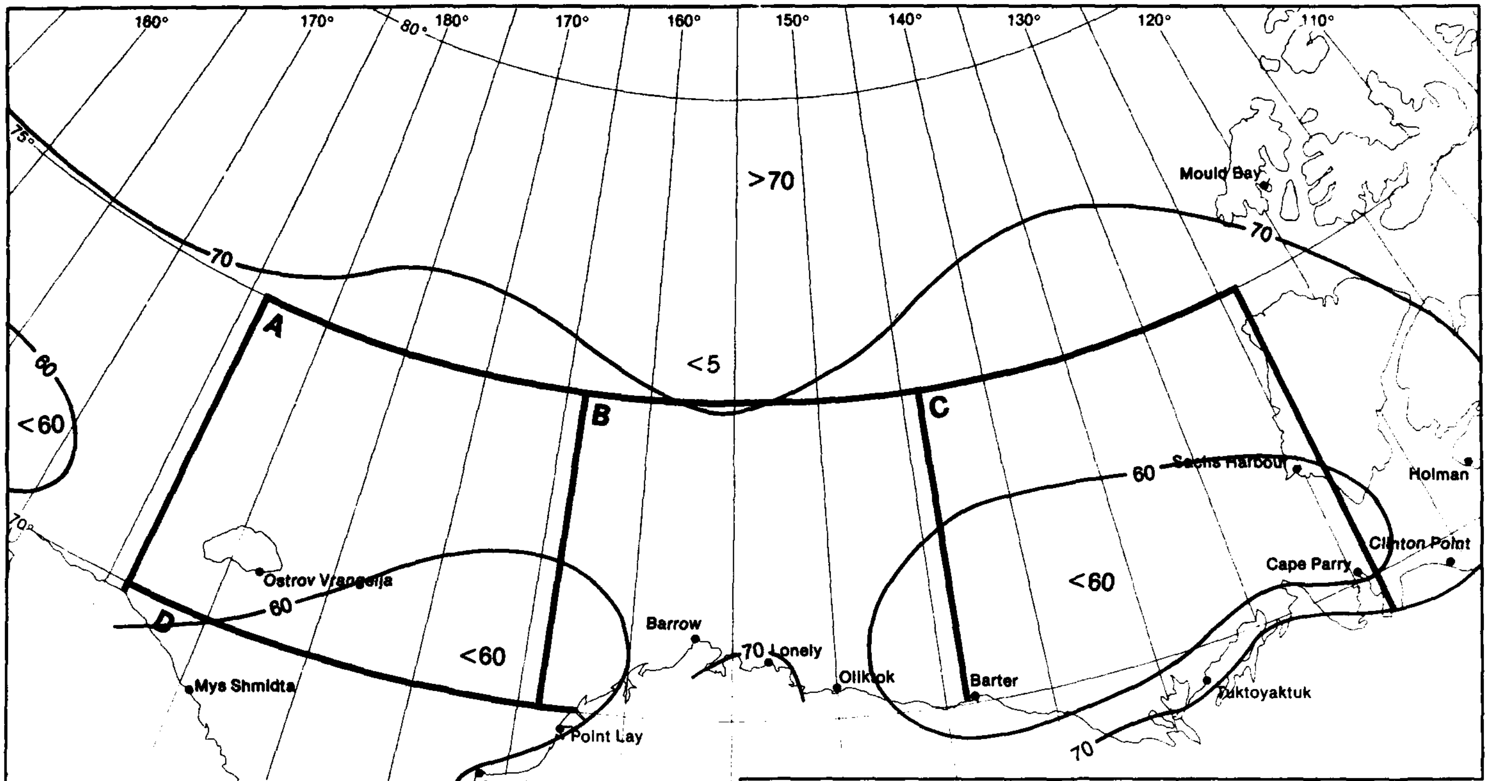
Marine Area D

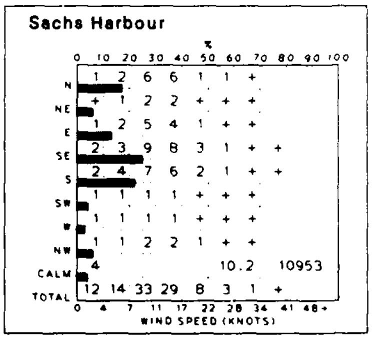
% / Wind speed (knots)	0	4	7	11	17	22	28	34	41	48+
N		1	9	8	2					
NE		4	7	23	5	2	2			
E			1	4		5	2			
SE			2	3	4	2				
S				2	1					
SW				2						
W										
NW				1	2					
CALM	2					14.3			41	
TOTAL	2	5	20	44	15	10	5			

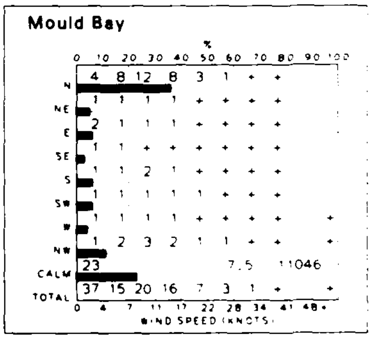
11 Wind Speed ≦10 and ≧34 Knots

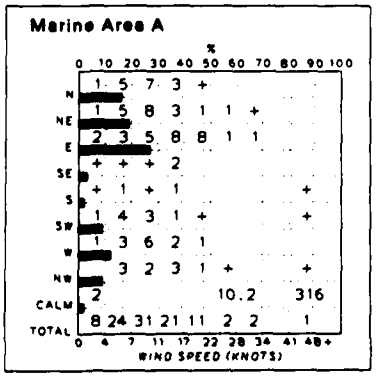
February

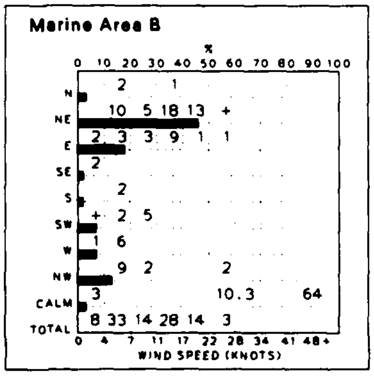

Ostrov Vrangelja
%
0 10 20 30 40 50 60 70 80 90 100
N 1 1 1 3 4 4 3 2 + +
NE 1 4 4 6 3 1 1 + +
E 2 3 2 2 1 +
SE + + + + + +
S 1 1 + + + +
SW 1 2 1 + + + + + +
W 2 3 1 1 + + + + + +
NW 1 1 + + 1 1 + + + +
CALM 29 9.9 4417
TOTAL 37 14 11 14 10 7 5 2 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Mys Shmidta
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 1 1 1 + + +
NE + + + + + +
E 1 1 1 1 + + + +
SE 1 3 2 1 + + + + +
S 2 3 1 + + + +
SW 1 1 + + + +
W 1 2 2 3 1 1 + + + +
NW 1 3 7 13 9 7 1 1 + +
CALM 17 11.0 4926
TOTAL 24 16 15 20 12 9 2 2 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Ostrov Kolychino
%
0 10 20 30 40 50 60 70 80 90 100
N 1 6 12 13 7 3 + + +
NE + 1 2 2 1 1 + +
E + 1 2 1 1 + +
SE + + + 1 1 + + +
S 1 3 3 3 2 1 1 +
SW + 1 1 + + + +
W 1 2 1 1 + +
NW 1 4 6 3 1 + + +
CALM 7 10.7 3037
TOTAL 12 19 27 24 12 5 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Mys Uelen
%
0 10 20 30 40 50 60 70 80 90 100
N 3 8 12 14 7 3 + +
NE 1 2 2 2 + + +
E + 1 + 1 + + + + + +
SE + + + + + + + + + +
S 1 2 2 2 2 1 1 1 + +
SW 1 2 1 + + + + + + +
W 1 1 + + + + +
NW + 2 2 3 1 + +
CALM 14 10.2 4877
TOTAL 21 17 20 23 11 5 2 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Tin City
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 4 10 16 20 8 2 + +
NE + 1 2 3 3 3 2 1 +
E + + + + + + + +
SE + 1 1 1 1 1 + + + +
S + 1 2 2 1 1 + + + +
SW + 1 1 1 + + + +
W + + + + + + + +
NW + + + + + 1 + + +
CALM 4 18.5 19604
TOTAL 6 5 10 17 22 25 11 4 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Kotzebue
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 3 2 1 + + +
NE 1 5 5 1 + + + +
E 2 5 6 5 3 2 1 + +
SE 1 2 3 5 3 2 1 + +
S 1 2 1 1 + + + +
SW 1 2 1 + + + + +
W 1 3 3 3 1 + + +
NW 1 2 2 3 1 1 + +
CALM 5 10.4 21959
TOTAL 14 23 24 19 10 6 3 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Cape Lisburne
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 1 + + +
NE + 1 1 1 + + + +
E 1 5 10 9 2 1 +
SE 3 8 12 8 1 + + + +
S 1 1 1 1 1 1 1 + + +
SW + + 1 2 2 2 1 1 + +
W + 1 1 + + + + + + +
NW + 1 1 + + + + +
CALM 13 9.6 19186
TOTAL 20 17 27 22 7 4 2 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Point Lay
%
0 10 20 30 40 50 60 70 80 90 100
N + 2 3 2 1 + +
NE 1 4 8 8 6 5 3 + +
E 1 3 5 4 3 2 + + +
SE 1 2 2 1 1 + + +
S + 3 2 + + + + +
SW 1 2 2 1 1 + +
W + 2 2 1 + + + +
NW + 1 1 + + + +
CALM 9 11.6 3345
TOTAL 13 19 24 18 12 8 4 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Barrow
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 4 2 + +
NE + 3 9 6 1 + +
E 1 4 10 9 4 1 + + +
SE 1 2 4 3 1 1 + + + +
S 1 1 2 1 + + +
SW + 2 4 2 + + + +
W + 2 3 3 1 + + + + +
NW + 2 3 2 + + + + + +
CALM 1 9.9 18813
TOTAL 5 19 39 26 8 2 + + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Lonely
%
0 10 20 30 40 50 60 70 80 90 100
N 2 4 2 1 + + +
NE 2 6 9 7 3 2 1 + +
E 1 3 5 5 2 1 + +
SE + 2 2 1 + + + +
S + 1 1 + +
SW 1 4 2 1 + + + +
W 1 4 4 1 + + + +
NW 1 3 1 + + + + +
CALM 11 8.7 3505
TOTAL 19 26 26 17 6 4 1 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Oliktok
%
0 10 20 30 40 50 60 70 80 90 100
N 1 1 1 + + + +
NE 1 5 8 6 3 1 +
E 1 2 6 5 4 2 1 +
SE + 2 1 1 + + + +
S + 1 1 + + +
SW 1 4 8 5 1 + + + +
W 1 3 5 4 1 1 + + + +
NW + 1 1 + + + + + +
CALM 9 10.0 3364
TOTAL 15 18 30 22 9 5 1 + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Barter
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 + + + + +
NE + 1 1 1 + + + + +
E 1 4 8 10 4 3 1 + + +
SE 1 2 3 2 1 1 + + +
S 1 1 1 + + +
SW 1 2 4 1 + + + +
W 1 3 9 9 3 2 1 1 + +
NW + 1 2 3 2 1 + + + +
CALM 3 11.9 18627
TOTAL 8 15 29 27 10 6 3 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Tuktoyaktuk
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 4 3 1 + +
NE + 1 1 1 +
E 1 3 5 4 1 + +
SE 1 4 7 6 2 + +
S 1 3 3 2 1 +
SW 1 1 2 1 + + +
W 1 3 5 3 1 + + +
NW + 2 6 5 2 + + +
CALM 8 9.0 3162
TOTAL 15 19 33 25 7 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Cape Parry
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 2 2 1 + + +
NE 1 1 1 + + +
E 3 3 5 5 3 2 + + + + +
SE 1 1 3 4 3 1 + + + + +
S 1 1 1 1 + + +
SW 2 1 1 1 + + +
W 2 3 5 4 2 1 + +
NW 1 1 4 5 3 1 + +
CALM 11 9.8 19838
TOTAL 23 14 21 22 13 5 1 + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Clinton Point
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 2 4 3 1 + + + +
NE + + +
E 1 1 2 1 +
SE 2 4 7 4 1 +
S 1 1 2 1 + +
SW 1 2 1 1 + +
W 3 6 5 1 + +
NW 1 5 11 9 3 1 + + + +
CALM 6 9.1 4702
TOTAL 16 22 30 21 8 2 + + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)
Holman
%
0 10 20 30 40 50 60 70 80 90 100
N 2 2 3 3 1 + + + +
NE + + +
E 1 + + + +
SE 2 4 5 2 1 +
S 4 7 5 2 + +
SW 2 2 1 + + + + +
W 1 1 1 1 1 2 2 1 +
NW 2 3 6 5 3 3 2 1 1 +
CALM 17 9.7 4456
TOTAL 29 18 21 13 7 5 4 2 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

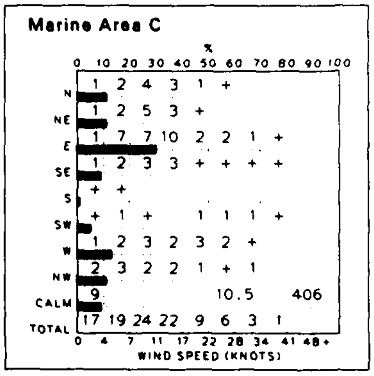


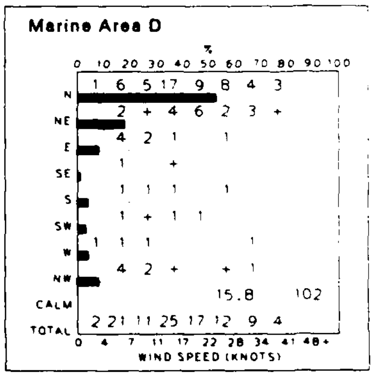




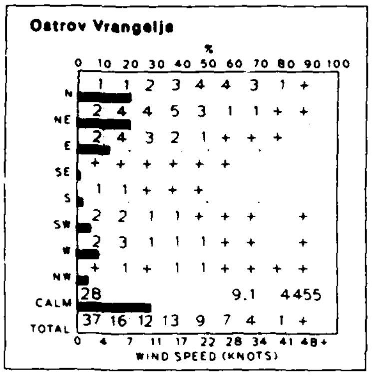


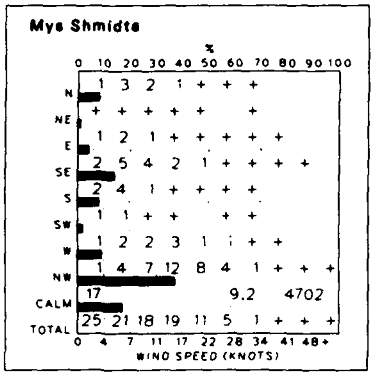


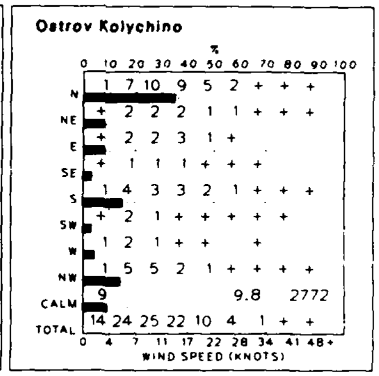


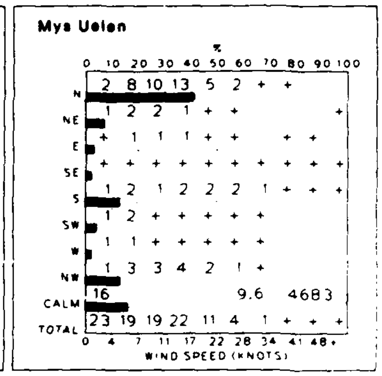


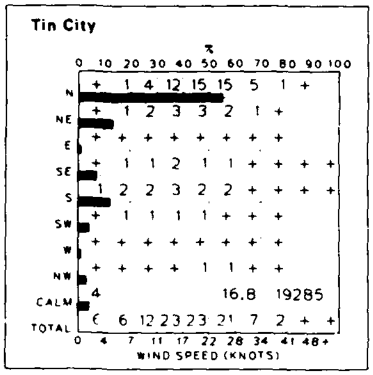
11 Wind Speed ≦10 and ≧34 Knots **March**

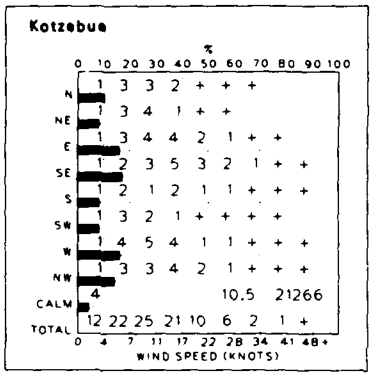

Ostrov Vrangelja
%
CALM
TOTAL
WIND SPEED (KNOTS)

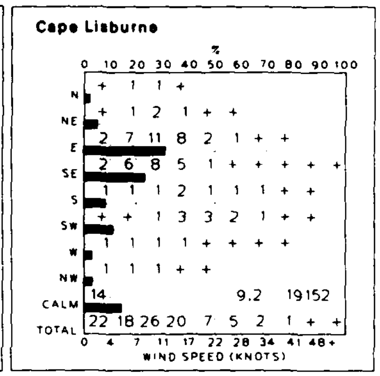

Mys Shmidta
%
CALM
TOTAL
WIND SPEED (KNOTS)

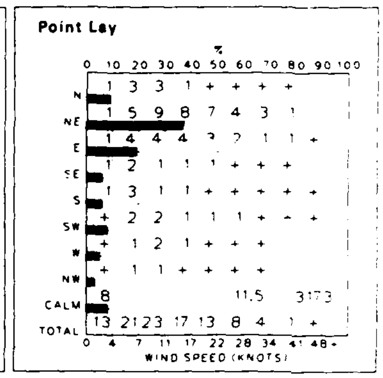

Ostrov Kolychino
%
CALM
TOTAL
WIND SPEED (KNOTS)

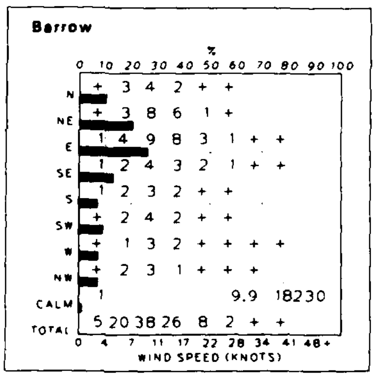

Mys Uelen
%
CALM
TOTAL
WIND SPEED (KNOTS)

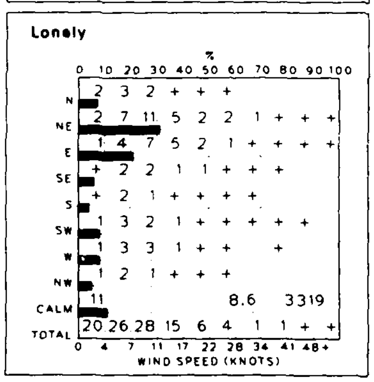

Tin City
%
CALM
TOTAL
WIND SPEED (KNOTS)

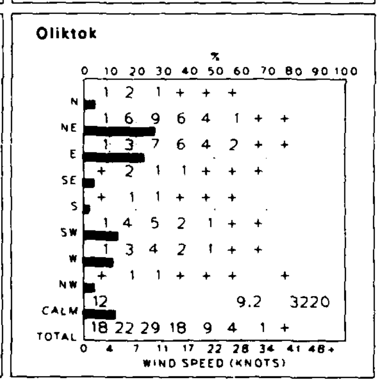

Kotzebue
%
CALM
TOTAL
WIND SPEED (KNOTS)

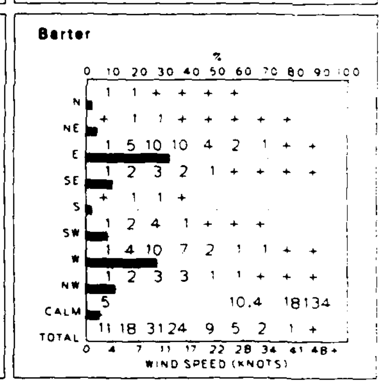

Cape Lisburne
%
CALM
TOTAL
WIND SPEED (KNOTS)

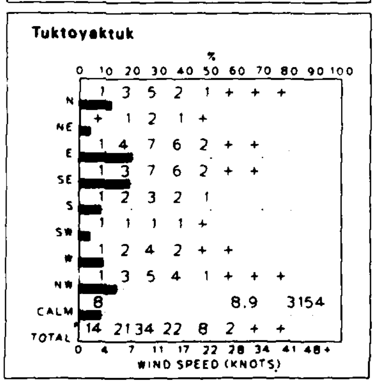

Point Lay
%
CALM
TOTAL
WIND SPEED (KNOTS)

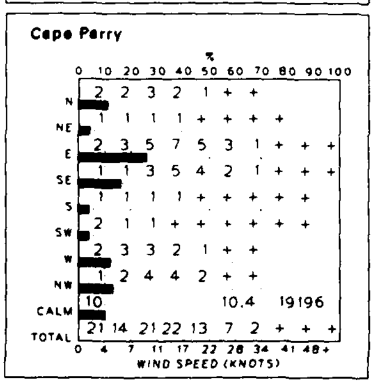

Barrow
%
CALM
TOTAL
WIND SPEED (KNOTS)

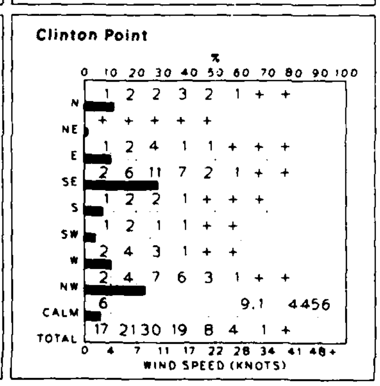

Lonely
%
CALM
TOTAL
WIND SPEED (KNOTS)

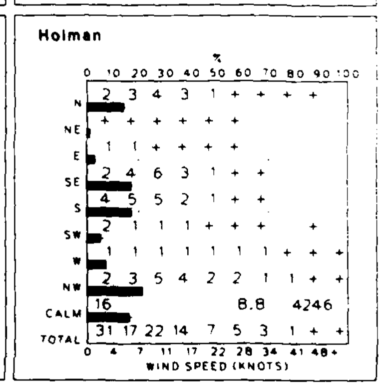

Oliktok
%
CALM
TOTAL
WIND SPEED (KNOTS)

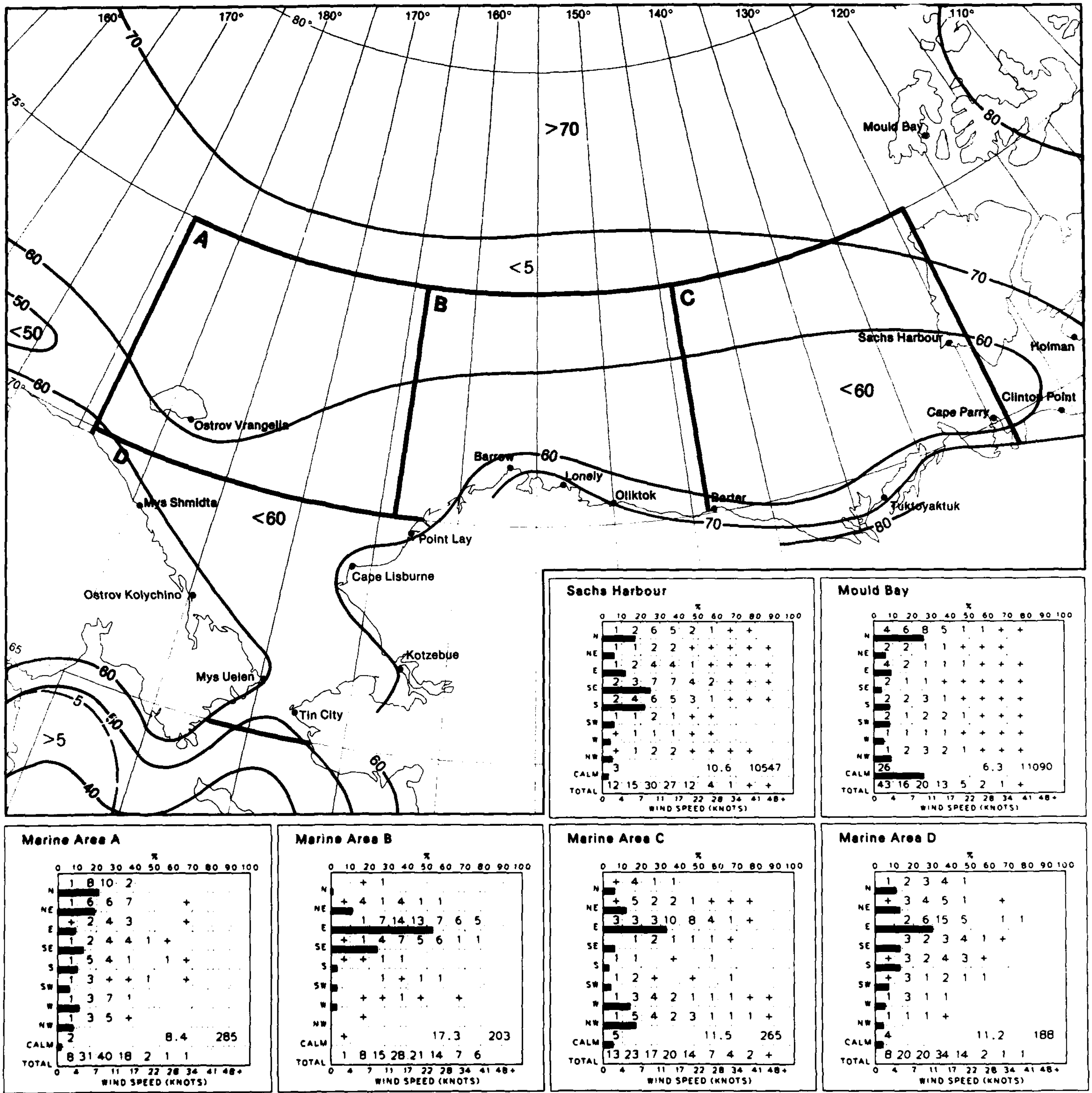

Barter
%
CALM
TOTAL
WIND SPEED (KNOTS)


Tuktoyaktuk
%
CALM
TOTAL
WIND SPEED (KNOTS)


Cape Parry
%
CALM
TOTAL
WIND SPEED (KNOTS)

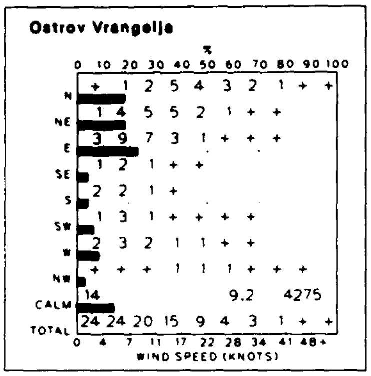

Clinton Point
%
CALM
TOTAL
WIND SPEED (KNOTS)

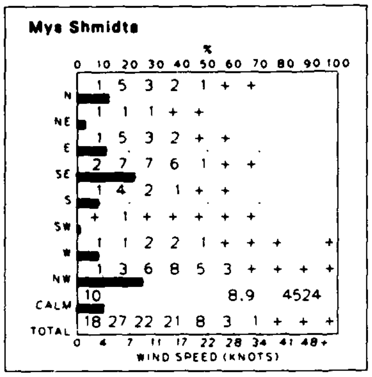

Holman
%
CALM
TOTAL
WIND SPEED (KNOTS)

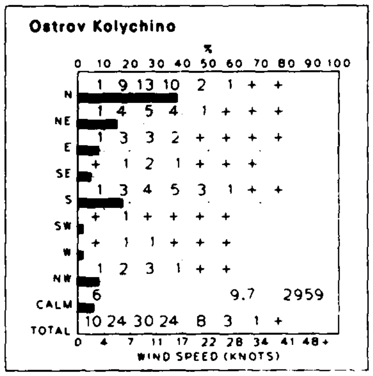


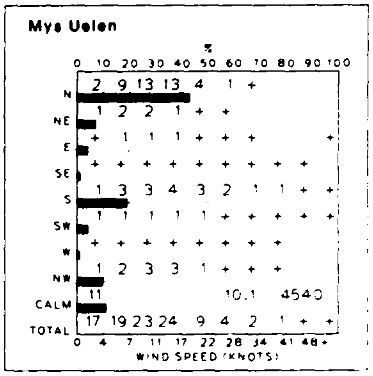
11 Wind Speed ≦10 and ≧34 Knots

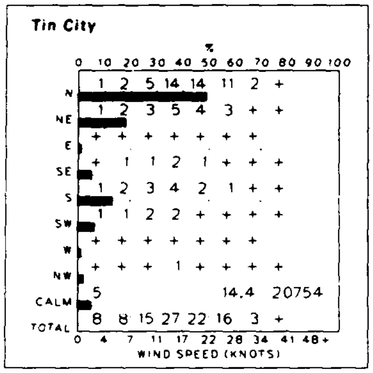
April

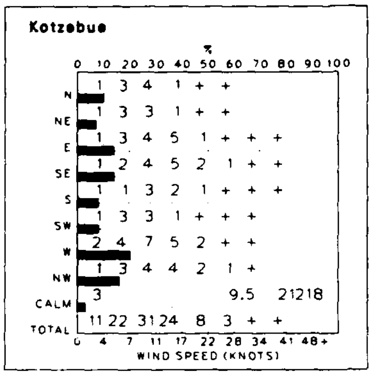

Ostrov Vrangelje
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 2 5 4 3 2 1 + +
NE 1 4 5 5 2 1 + +
E 3 9 7 3 1 + + +
SE 1 2 1 + +
S 2 2 1 +
SW 1 3 1 + + + +
W 2 3 2 1 1 + +
NW + + + 1 1 1 + + +
CALM 14 9.2 4275
TOTAL 24 24 20 15 9 4 3 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

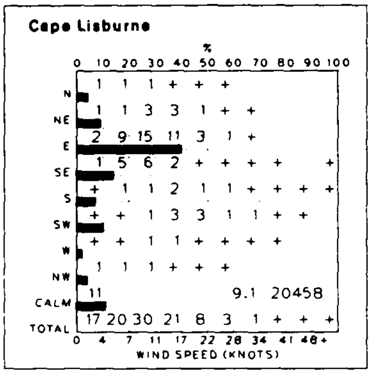

Mys Shmidta
%
0 10 20 30 40 50 60 70 80 90 100
N 1 5 3 2 1 + +
NE 1 1 1 + +
E 1 5 3 2 + +
SE 2 7 7 6 1 + +
S 1 4 2 1 + +
SW + 1 + + + + +
W 1 1 2 2 1 + + + +
NW 1 3 6 8 5 3 + + + +
CALM 10 8.9 4524
TOTAL 18 27 22 21 8 3 1 + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

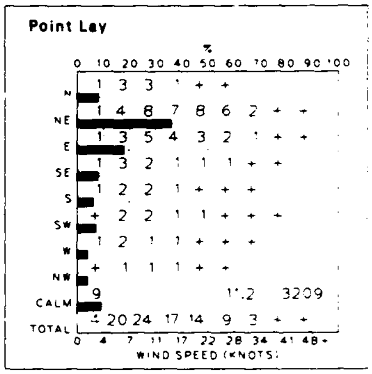

Ostrov Kolychino
%
0 10 20 30 40 50 60 70 80 90 100
N 1 9 13 10 2 1 + +
NE 1 4 5 4 1 + + +
E 1 3 3 2 + + + +
SE + 1 2 1 + + +
S 1 3 4 5 3 1 + +
SW + 1 + + + +
W + 1 1 + + +
NW 1 2 3 1 + +
CALM 6 9.7 2959
TOTAL 10 24 30 24 8 3 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

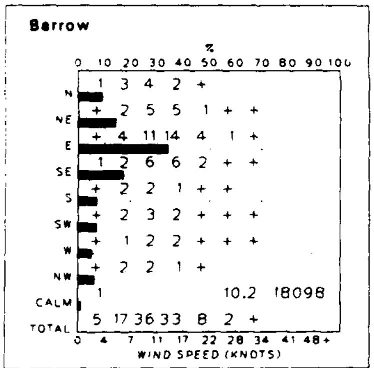

Mys Uelen
%
0 10 20 30 40 50 60 70 80 90 100
N 2 9 13 13 4 1 +
NE 1 2 2 1 + +
E + 1 1 1 + + + +
SE + + + + + + + + +
S 1 3 3 4 3 2 1 1 + +
SW 1 1 1 1 1 + + + + +
W + + + + + + + +
NW 1 2 3 3 1 + + +
CALM 11 10.1 4540
TOTAL 17 19 23 24 9 4 2 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

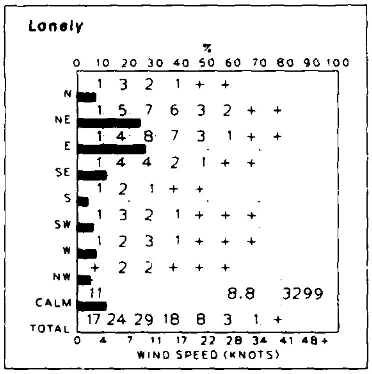

Tin City
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 5 14 14 11 2 +
NE 1 2 3 5 4 3 + +
E + + + + + + + +
SE + 1 1 2 1 + + +
S 1 2 3 4 2 1 + +
SW 1 1 2 2 + + + +
W + + + + + + + +
NW + + + 1 + + + +
CALM 5 14.4 20754
TOTAL 8 8 15 27 22 16 3 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

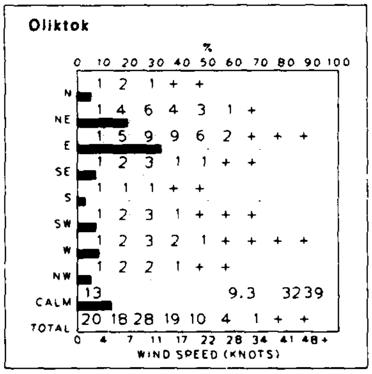

Kotzebue
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 4 1 + +
NE 1 3 3 1 + +
E 1 3 4 5 1 + + +
SE 1 2 4 5 2 1 + +
S 1 1 3 2 1 + + +
SW 1 3 3 1 + + +
W 2 4 7 5 2 + +
NW 1 3 4 4 2 1 +
CALM 3 9.5 21218
TOTAL 11 22 31 24 8 3 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

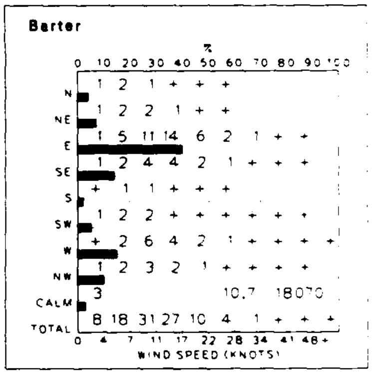

Cape Lisburne
%
0 10 20 30 40 50 60 70 80 90 100
N 1 1 1 + + +
NE 1 1 3 3 1 + +
E 2 9 15 11 3 1 +
SE 1 5 6 2 + + + +
S + 1 1 2 1 1 + + + +
SW + + 1 3 3 1 1 + +
W + + 1 1 + + + +
NW 1 1 1 + + +
CALM 11 9.1 20458
TOTAL 17 20 30 21 8 3 1 + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

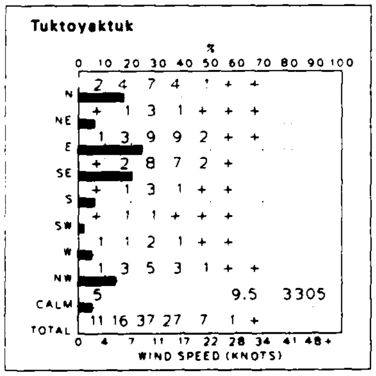

Point Lay
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 3 1 + +
NE 1 4 8 7 8 6 2 + +
E 1 3 5 4 3 2 1 + +
SE 1 3 2 1 1 1 + +
S 1 2 2 1 + + +
SW + 2 2 1 1 + + +
W 1 2 1 1 + + +
NW + 1 1 1 + +
CALM 9 11.2 3209
TOTAL 2 20 24 17 14 9 3 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

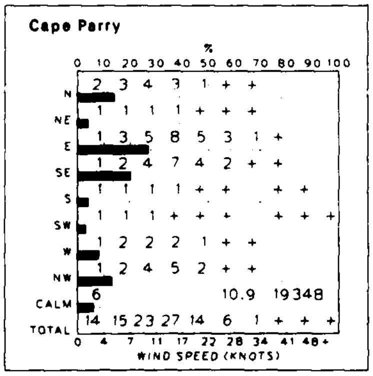

Barrow
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 4 2 +
NE + 2 5 5 1 + +
E + 4 11 14 4 1 +
SE 1 2 6 6 2 + +
S + 2 2 1 + +
SW + 2 3 2 + + +
W + 1 2 2 + + +
NW + 2 2 1 +
CALM 1 10.2 18098
TOTAL 5 17 36 33 8 2 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

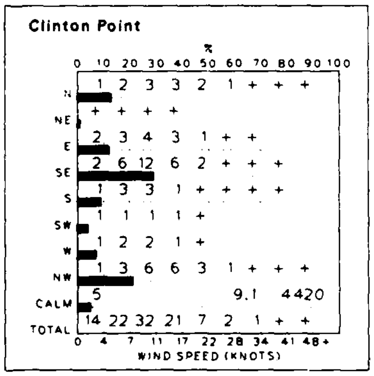

Lonely
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 2 1 + +
NE 1 5 7 6 3 2 + +
E 1 4 8 7 3 1 + +
SE 1 4 4 2 1 + +
S 1 2 1 + +
SW 1 3 2 1 + + +
W 1 2 3 1 + + +
NW + 2 2 + + +
CALM 11 8.8 3299
TOTAL 17 24 29 18 8 3 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

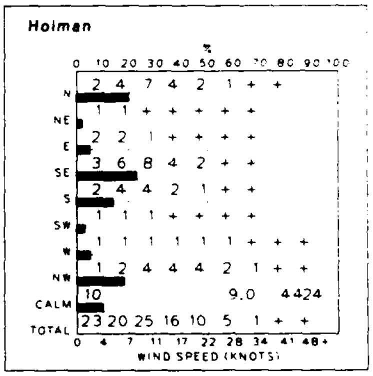

Oliktok
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 1 + +
NE 1 4 6 4 3 1 +
E 1 5 9 9 6 2 + + +
SE 1 2 3 1 1 + +
S 1 1 1 + +
SW 1 2 3 1 + + +
W 1 2 3 2 1 + + + +
NW 1 2 2 1 + +
CALM 13 9.3 3239
TOTAL 20 18 28 19 10 4 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

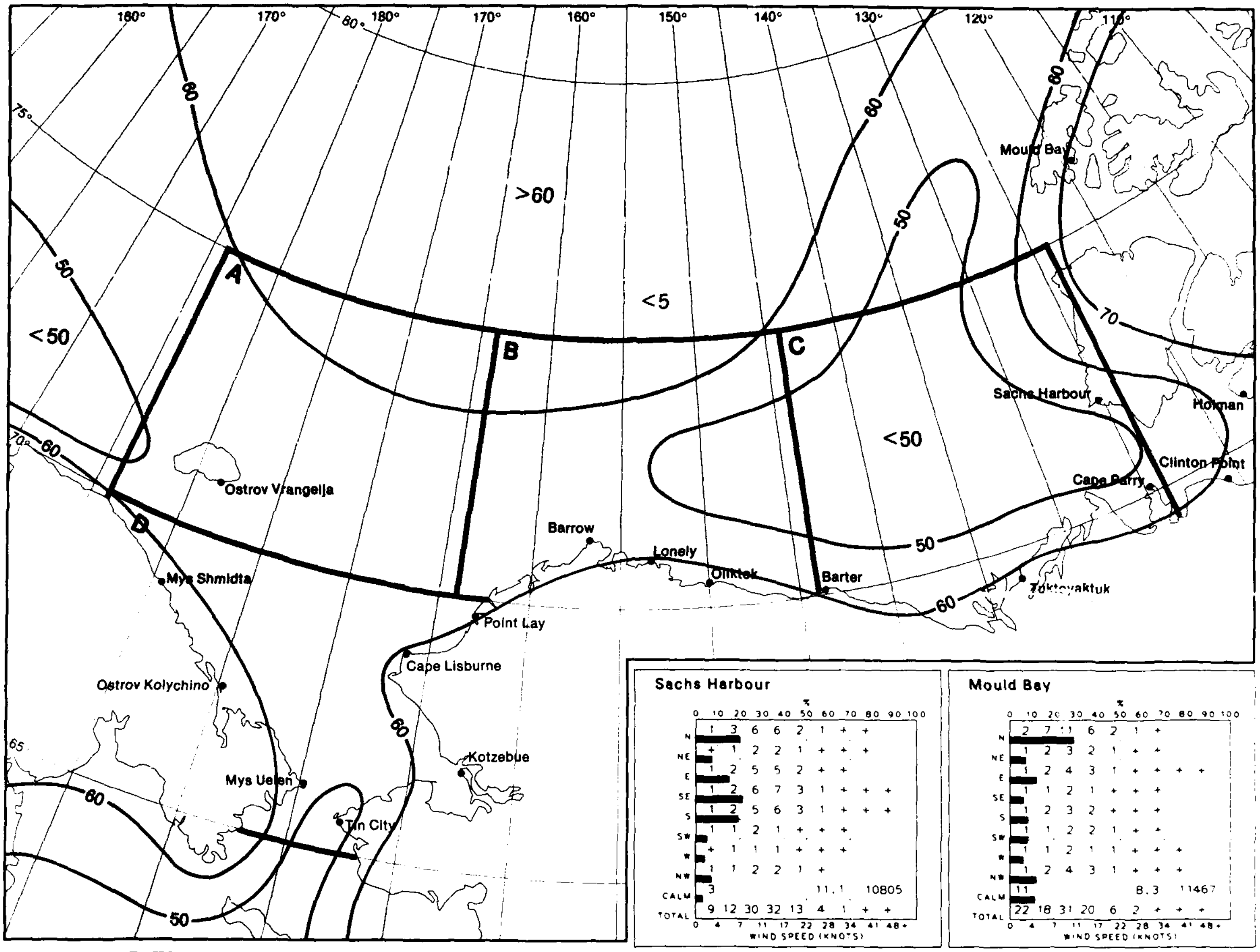

Barter
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 1 + + +
NE 1 2 2 1 + +
E 1 5 11 14 6 2 1 + +
SE 1 2 4 4 2 1 + + +
S + 1 1 + + +
SW 1 2 2 + + + + + +
W + 2 6 4 2 1 + + + +
NW 1 2 3 2 1 + + + +
CALM 3 10.7 18070
TOTAL 8 18 31 27 10 4 1 + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

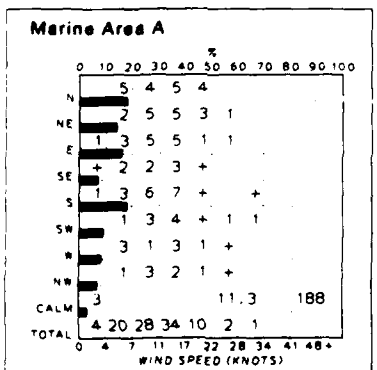

Tuktoyaktuk
%
0 10 20 30 40 50 60 70 80 90 100
N 2 4 7 4 1 + +
NE + 1 3 1 + + +
E 1 3 9 9 2 + +
SE + 2 8 7 2 +
S + 1 3 1 + +
SW + 1 1 + + +
W 1 1 2 1 + +
NW 1 3 5 3 1 + +
CALM 5 9.5 3305
TOTAL 11 16 37 27 7 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

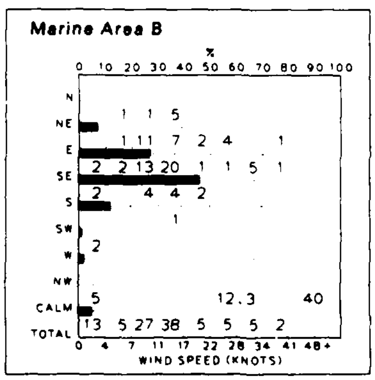

Cape Parry
%
0 10 20 30 40 50 60 70 80 90 100
N 2 3 4 3 1 + +
NE 1 1 1 1 + +
E 1 3 5 8 5 3 1 +
SE 1 2 4 7 4 2 + +
S 1 1 1 1 + + + +
SW 1 1 1 + + + + + +
W 1 2 2 2 1 + +
NW 1 2 4 5 2 + +
CALM 6 10.9 19348
TOTAL 14 15 23 27 14 6 1 + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

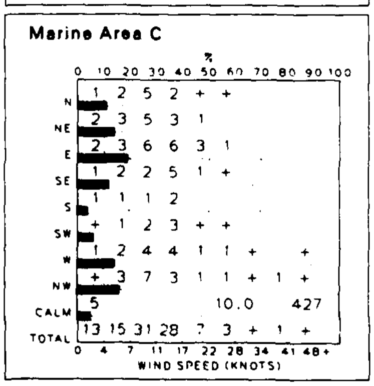

Clinton Point
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 3 3 2 1 + + +
NE + + + +
E 2 3 4 3 1 + +
SE 2 6 12 6 2 + + +
S 1 3 3 1 + + + +
SW 1 1 1 1 +
W 1 2 2 1 +
NW 1 3 6 6 3 1 + + +
CALM 5 9.1 4420
TOTAL 14 22 32 21 7 2 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

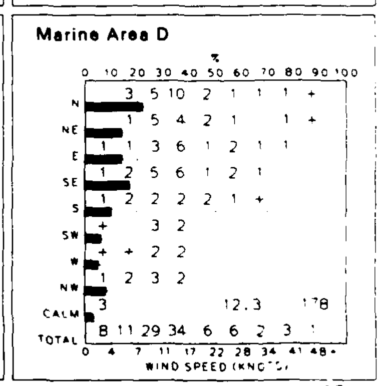

Holman
%
0 10 20 30 40 50 60 70 80 90 100
N 2 4 7 4 2 1 + +
NE 1 1 + + + + +
E 2 2 1 + + + +
SE 3 6 8 4 2 + +
S 2 4 4 2 1 + +
SW 1 1 1 + + + +
W 1 1 1 1 1 1 + + +
NW 1 2 4 4 4 2 1 + +
CALM 10 9.0 4424
TOTAL 23 20 25 16 10 5 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)



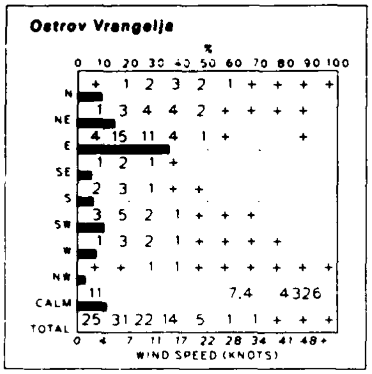


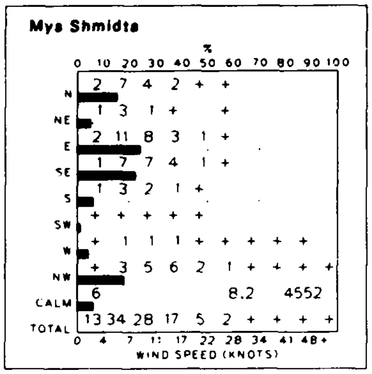


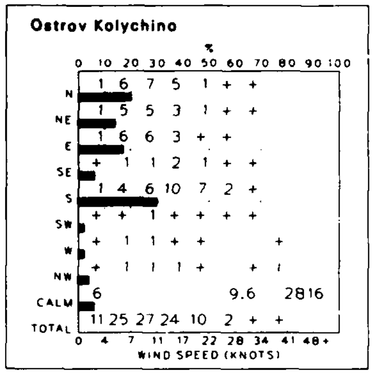


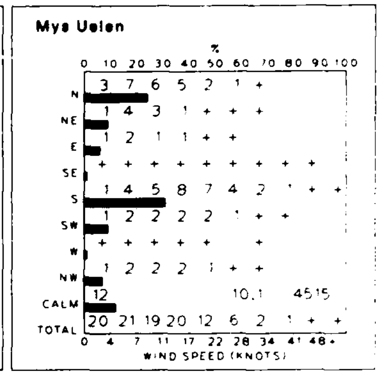


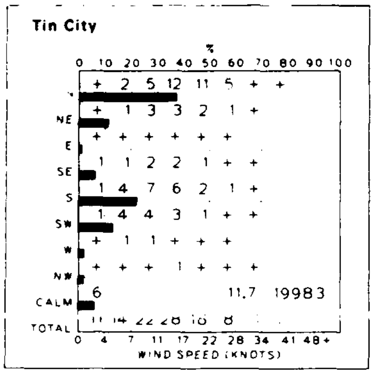
11 Wind Speed ≦10 and ≧34 Knots

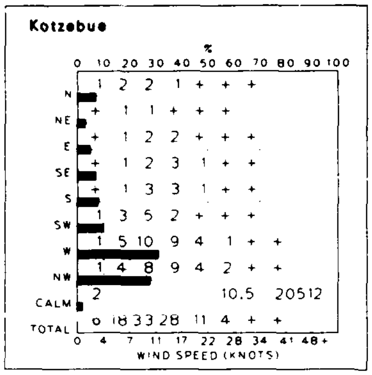

Ostrov Vrangelja
%
WIND SPEED (KNOTS)

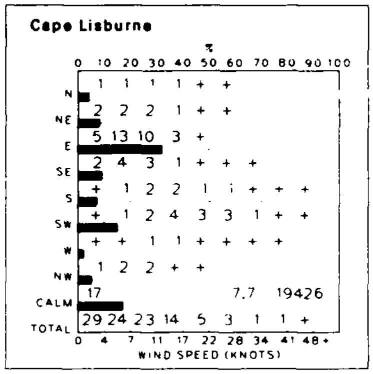

Mys Shmidta
%
WIND SPEED (KNOTS)

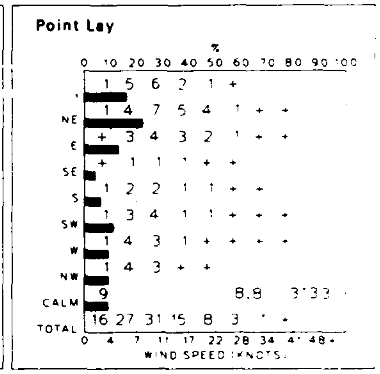

Ostrov Kolychino
%
WIND SPEED (KNOTS)

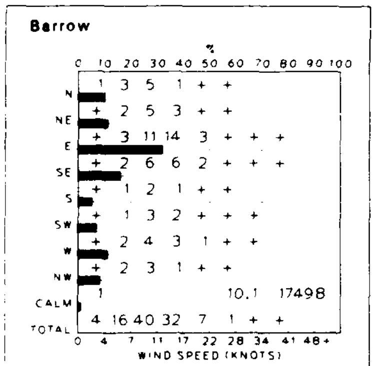

Mys Uelen
%
WIND SPEED (KNOTS)

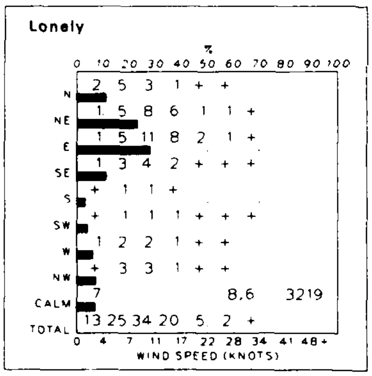

Tin City
%
WIND SPEED (KNOTS)

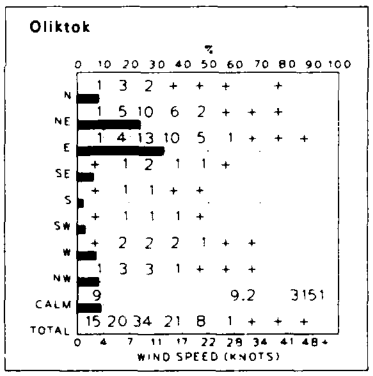

Kotzebue
%
WIND SPEED (KNOTS)

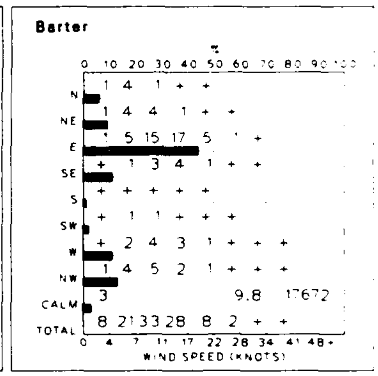

Cape Lisburne
%
WIND SPEED (KNOTS)

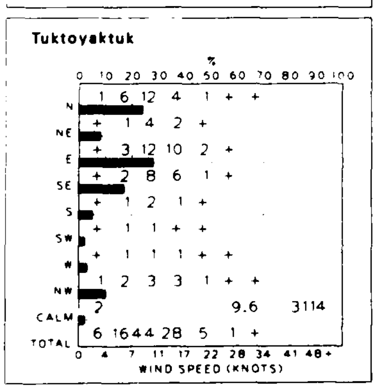

Point Lay
%
WIND SPEED (KNOTS)

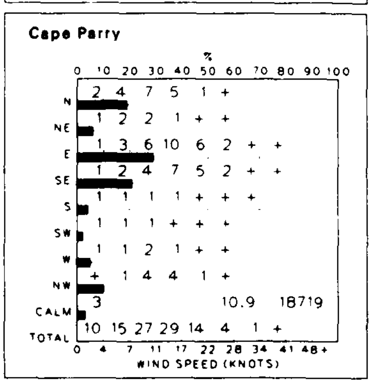

Barrow
%
WIND SPEED (KNOTS)

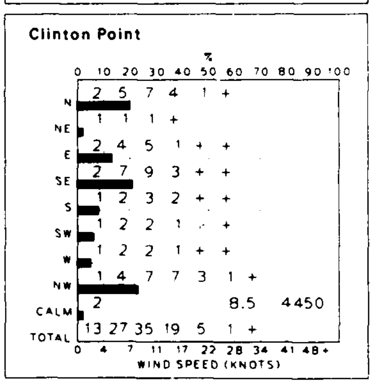

Lonely
%
WIND SPEED (KNOTS)

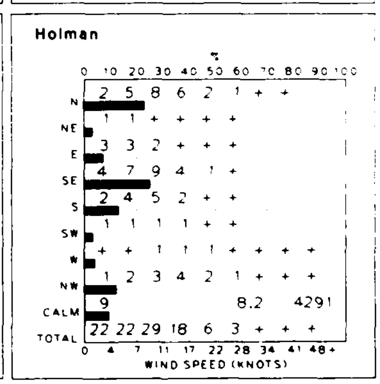

Oliktok
%
WIND SPEED (KNOTS)

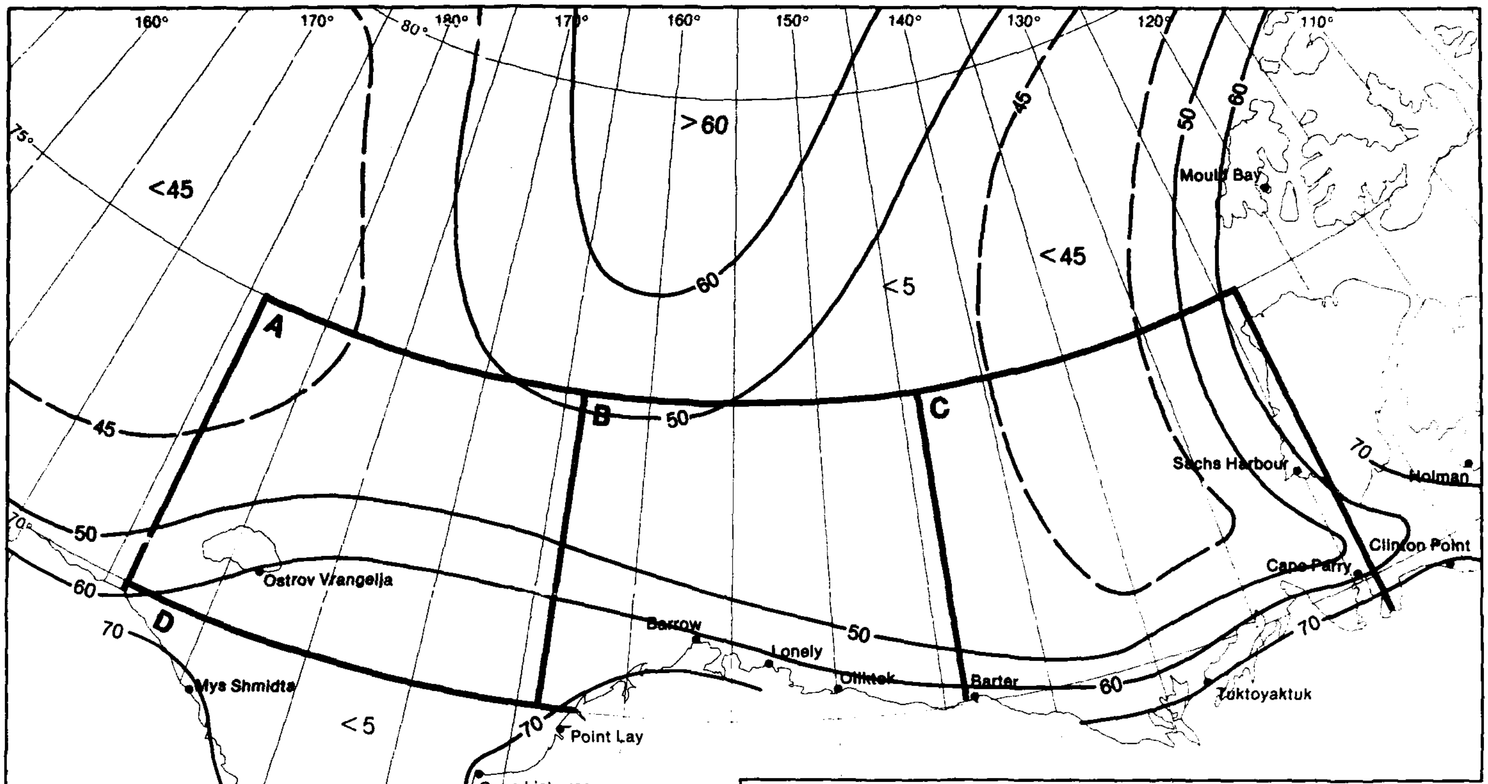

Barter
%
WIND SPEED (KNOTS)

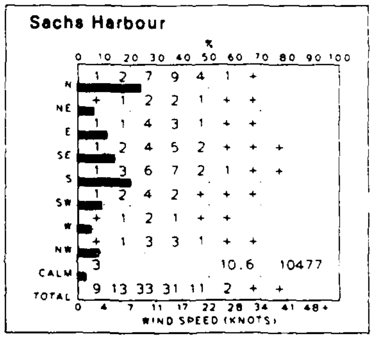

Tuktoyaktuk
%
WIND SPEED (KNOTS)

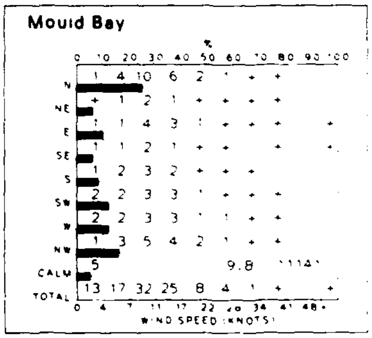

Cape Parry
%
WIND SPEED (KNOTS)

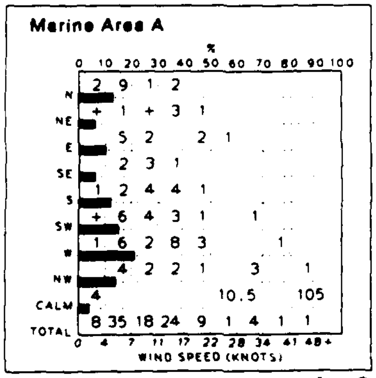

Clinton Point
%
WIND SPEED (KNOTS)

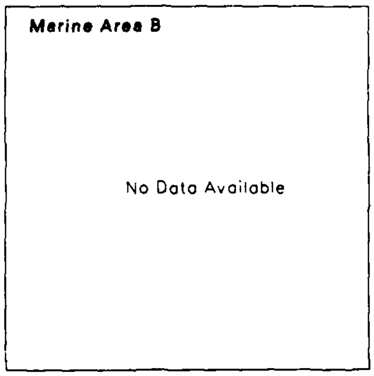

Holman
%
WIND SPEED (KNOTS)

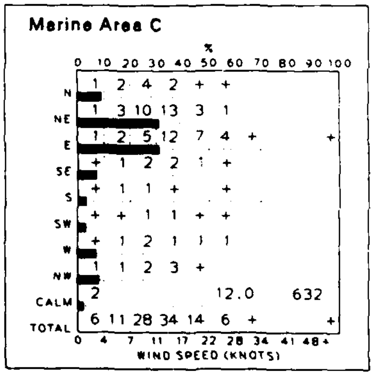


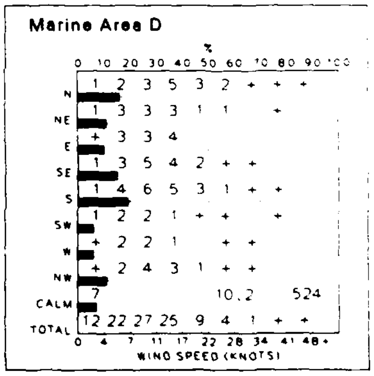




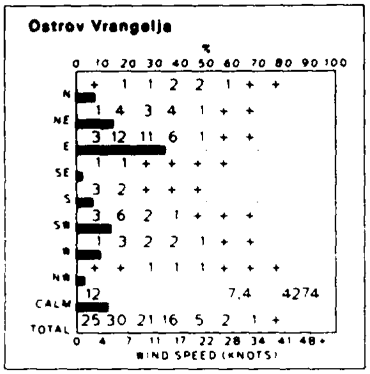


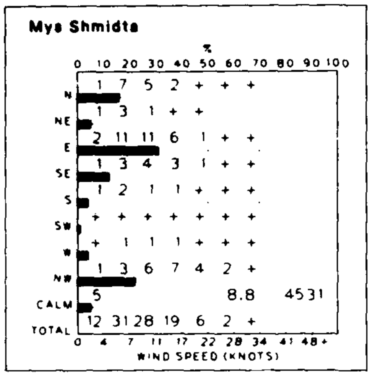


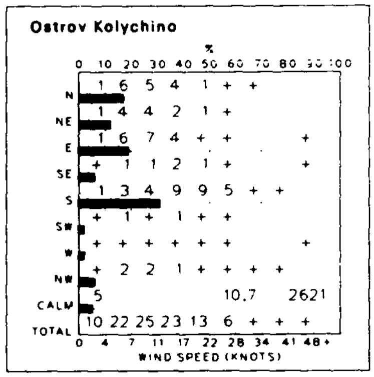


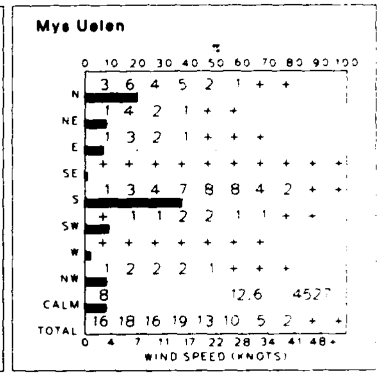


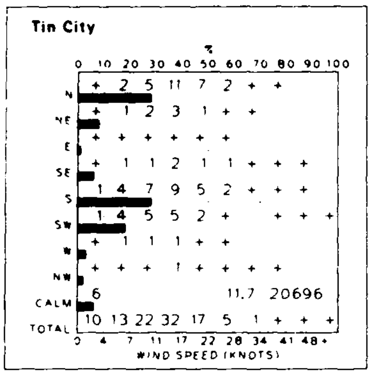
11 Wind Speed ≦10 and ≧34 Knots **June**

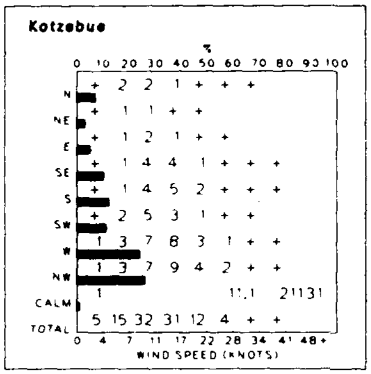

Ostrov Vrangelja
N + 1 1 2 2 1 + +
NE 1 4 3 4 1 + +
E 3 12 11 6 1 + +
SE 1 1 + + + +
S 3 2 + + +
SW 3 6 2 1 + + +
W 1 3 2 2 1 + +
NW + + 1 1 1 + + +
CALM 12 7.4 4274
TOTAL 25 30 21 16 5 2 1 +
WIND SPEED (KNOTS)

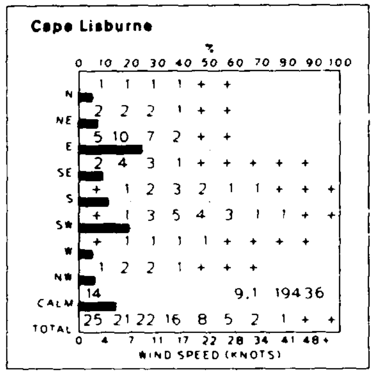

Mys Shmidta
N 1 7 5 2 + + +
NE 1 3 1 + +
E 2 11 11 6 1 + +
SE 1 3 4 3 1 + +
S 1 2 1 1 + + +
SW + + + + + + +
W + 1 1 1 + + +
NW 1 3 6 7 4 2 +
CALM 5 8.8 4531
TOTAL 12 31 28 19 6 2 +
WIND SPEED (KNOTS)

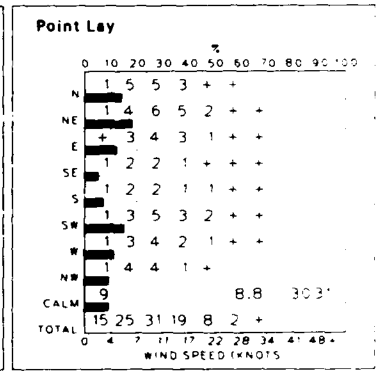

Ostrov Kolychino
N 1 6 5 4 1 + +
NE 1 4 4 2 1 +
E 1 6 7 4 + + +
SE + 1 1 2 1 + +
S 1 3 4 9 9 5 + +
SW + 1 + 1 + +
W + + + + + + +
NW + 2 2 1 + + + +
CALM 5 10.7 2621
TOTAL 10 22 25 23 13 6 + + +
WIND SPEED (KNOTS)

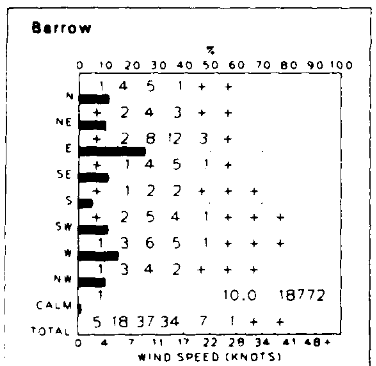

Mys Uelen
N 3 6 4 5 2 1 + +
NE 1 4 2 1 + +
E 1 3 2 1 + + +
SE + + + + + + + + + +
S 1 3 4 7 8 8 4 2 + +
SW + 1 1 2 2 1 1 + +
W + + + + + + +
NW 1 2 2 2 1 + + +
CALM 8 12.6 4527
TOTAL 16 18 16 19 13 10 5 2 + +
WIND SPEED (KNOTS)

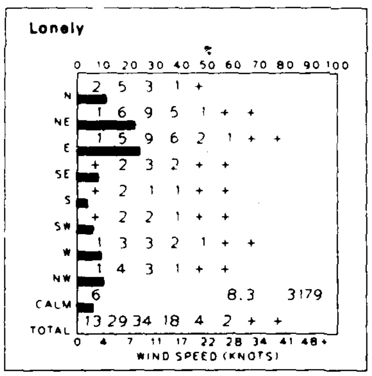

Tin City
N + 2 5 11 7 2 + +
NE + 1 2 3 1 + +
E + + + + + +
SE + 1 1 2 1 1 + + +
S 1 4 7 9 5 2 + + +
SW 1 4 5 5 2 + + + +
W + 1 1 1 + +
NW + + + 1 + + + +
CALM 6 11.7 20696
TOTAL 10 13 22 32 17 5 1 + + +
WIND SPEED (KNOTS)

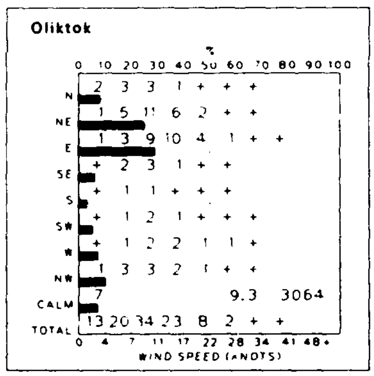

Kotzebue
N + 2 2 1 + + +
NE + 1 1 + +
E + 1 2 1 + +
SE 1 4 4 1 + + +
S + 1 4 5 2 + + +
SW + 2 5 3 1 + +
W 1 3 7 8 3 1 + +
NW 1 3 7 9 4 2 + +
CALM 1 11.1 21131
TOTAL 5 15 32 31 12 4 + +
WIND SPEED (KNOTS)

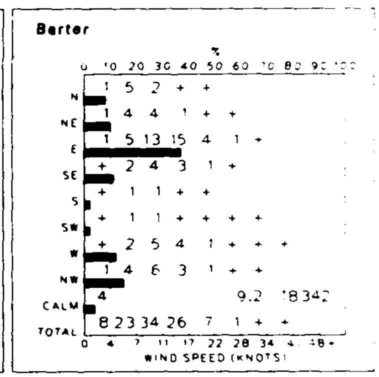

Cape Lisburne
N 1 1 1 1 + +
NE 2 2 2 1 + +
E 5 10 7 2 + +
SE 2 4 3 1 + + + + +
S + 1 2 3 2 1 1 + + +
SW + 1 3 5 4 3 1 1 + +
W + 1 1 1 1 + + + +
NW 1 2 2 1 + + +
CALM 14 9.1 19436
TOTAL 25 21 22 16 8 5 2 1 + +
WIND SPEED (KNOTS)

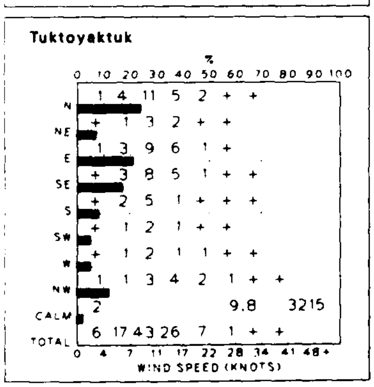

Point Lay
N 1 5 5 3 + +
NE 1 4 6 5 2 + +
E + 3 4 3 1 + +
SE 1 2 2 1 + + +
S 1 2 2 1 1 + +
SW 1 3 5 3 2 + +
W 1 3 4 2 1 + +
NW 1 4 4 1 +
CALM 9 8.8 3031
TOTAL 15 25 31 19 8 2 +
WIND SPEED (KNOTS)

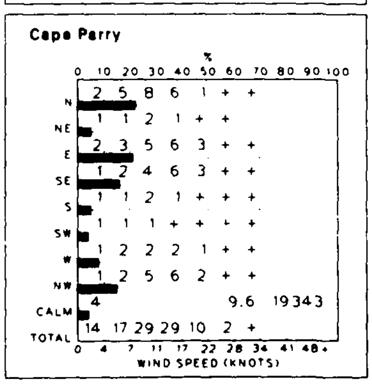

Barrow
N 1 4 5 1 + +
NE + 2 4 3 + +
E + 2 8 12 3 +
SE + 1 4 5 1 +
S + 1 2 2 + + +
SW + 2 5 4 1 + + +
W 1 3 6 5 1 + + +
NW 1 3 4 2 + + +
CALM 1 10.0 18772
TOTAL 5 18 37 34 7 1 + +
WIND SPEED (KNOTS)

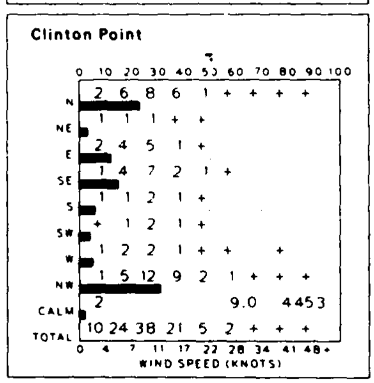

Lonely
N 2 5 3 1 +
NE 1 6 9 5 1 + +
E 1 5 9 6 2 1 + +
SE + 2 3 2 + +
S + 2 1 1 + +
SW + 2 2 1 + +
W 1 3 3 2 1 + +
NW 1 4 3 1 + +
CALM 6 8.3 3179
TOTAL 13 29 34 18 4 2 + +
WIND SPEED (KNOTS)

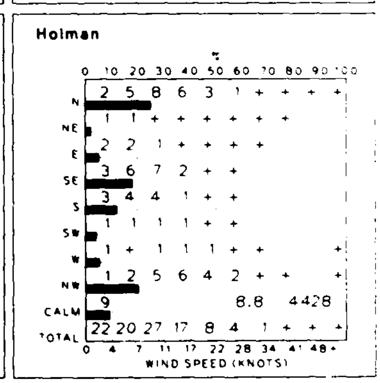

Oliktok
N 2 3 3 1 + + +
NE 1 5 11 6 2 + +
E 1 3 9 10 4 1 + +
SE + 2 3 1 + +
S + 1 1 + + +
SW + 1 2 1 + + +
W + 1 2 2 1 1 +
NW 1 3 3 2 1 + +
CALM 7 9.3 3064
TOTAL 13 20 34 23 8 2 + +
WIND SPEED (KNOTS)

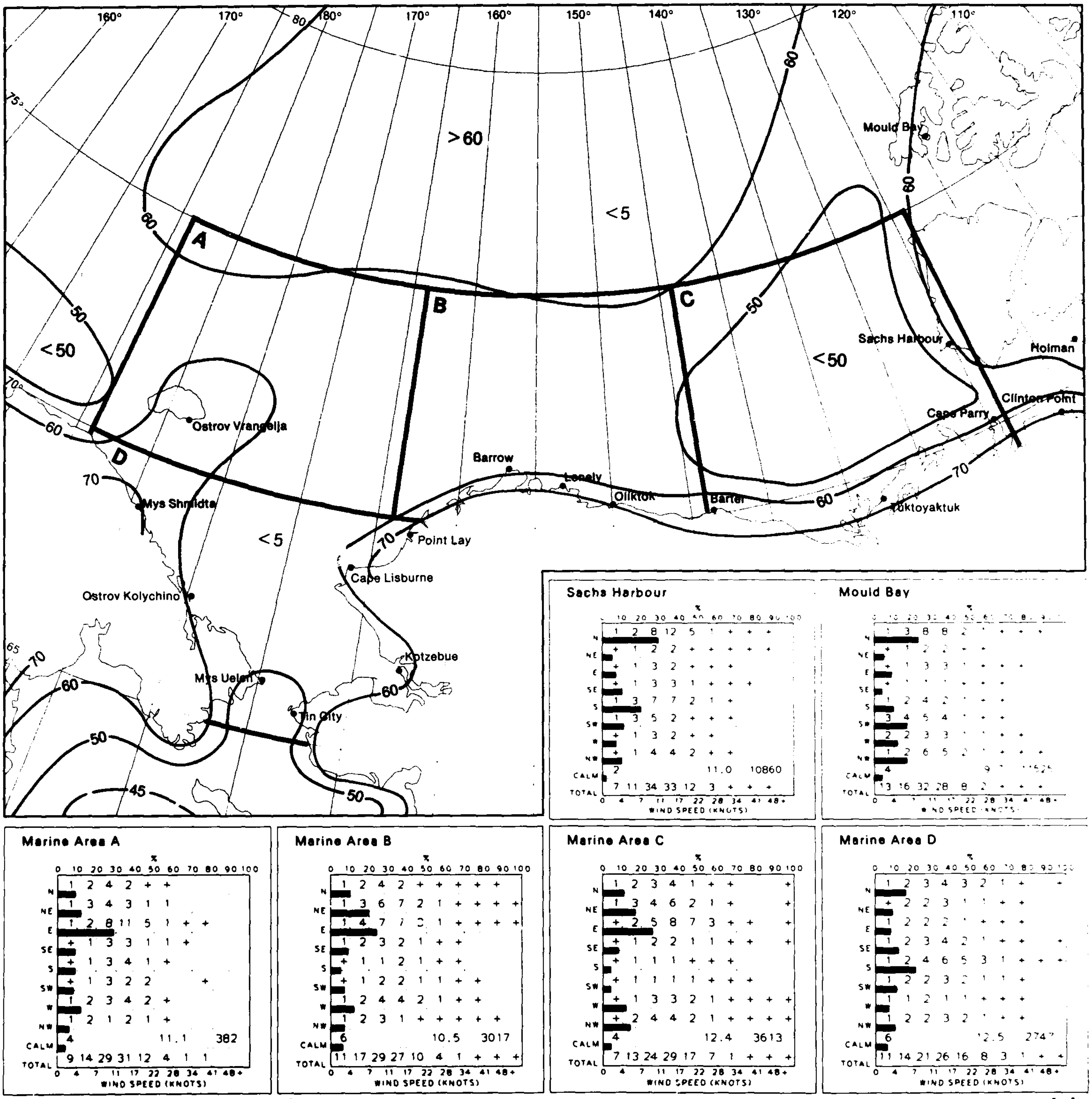

Barter
N 1 5 2 + +
NE 1 4 4 1 + +
E 1 5 13 15 4 1 +
SE + 2 4 3 1 +
S + 1 1 + +
SW + 1 1 + + + +
W + 2 5 4 1 + + +
NW 1 4 6 3 1 + +
CALM 4 9.2 18342
TOTAL 8 23 34 26 7 1 + +
WIND SPEED (KNOTS)


Tuktoyaktuk
N 1 4 11 5 2 + +
NE + 1 3 2 + +
E 1 3 9 6 1 +
SE + 3 8 5 1 + +
S + 2 5 1 + + +
SW + 1 2 1 + +
W + 1 2 1 1 + +
NW 1 1 3 4 2 1 + +
CALM 2 9.8 3215
TOTAL 6 17 43 26 7 1 + +
WIND SPEED (KNOTS)


Cape Parry
N 2 5 8 6 1 + +
NE 1 1 2 1 + +
E 2 3 5 6 3 + +
SE 1 2 4 6 3 + +
S 1 1 2 1 + + +
SW 1 1 1 + + + +
W 1 2 2 2 1 + +
NW 1 2 5 6 2 + +
CALM 4 9.6 19343
TOTAL 14 17 29 29 10 2 +
WIND SPEED (KNOTS)

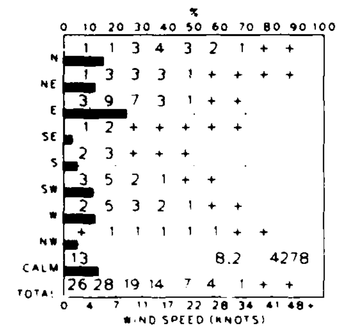

Clinton Point
N 2 6 8 6 1 + + + +
NE 1 1 1 + +
E 2 4 5 1 +
SE 1 4 7 2 1 +
S 1 1 2 1 +
SW + 1 2 1 +
W 1 2 2 1 + + +
NW 1 5 12 9 2 1 + + +
CALM 2 9.0 4453
TOTAL 10 24 38 21 5 2 + + +
WIND SPEED (KNOTS)

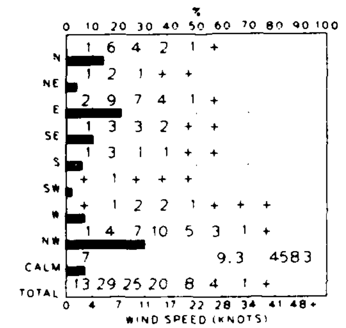

Holman
N 2 5 8 6 3 1 + + + +
NE 1 1 + + + + + +
E 2 2 1 + + + +
SE 3 6 7 2 + +
S 3 4 4 1 + +
SW 1 1 1 1 + +
W 1 + 1 1 1 + + +
NW 1 2 5 6 4 2 + + +
CALM 9 8.8 4428
TOTAL 22 20 27 17 8 4 1 + + +
WIND SPEED (KNOTS)

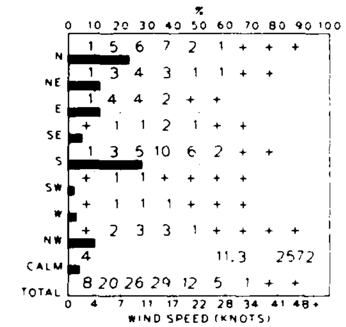


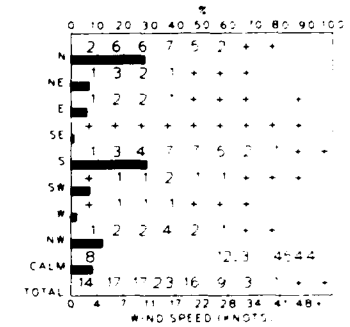
11 Wind Speed ≦10 and ≧34 Knots

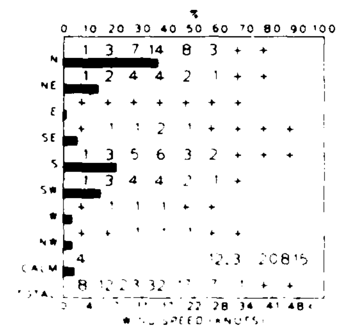
July

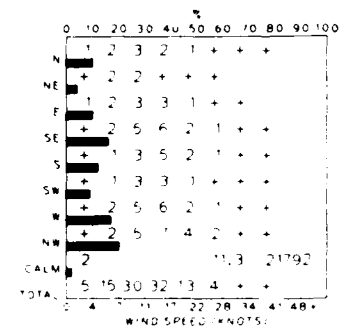
Ostrov Vrangelja


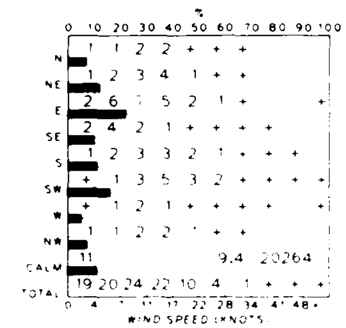
Mys Shmidta


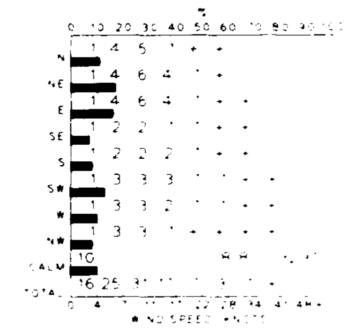
Ostrov Kolychino


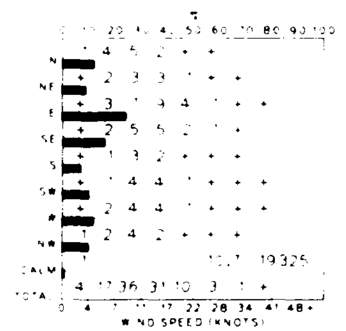
Mys Uelen


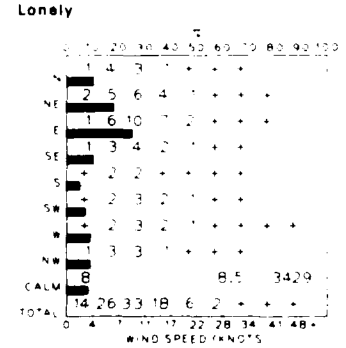
Tin City


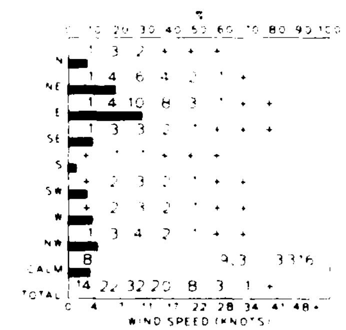
Kotzebue


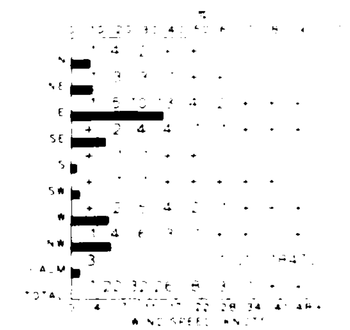
Cape Lisburne


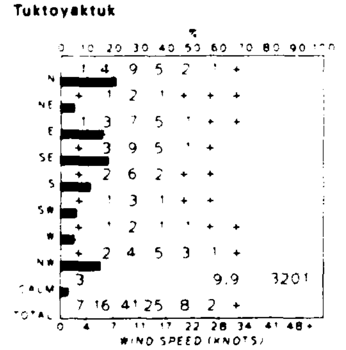
Point Lay


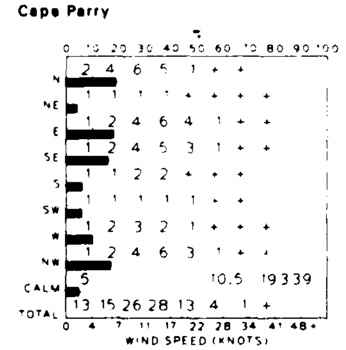
Barrow


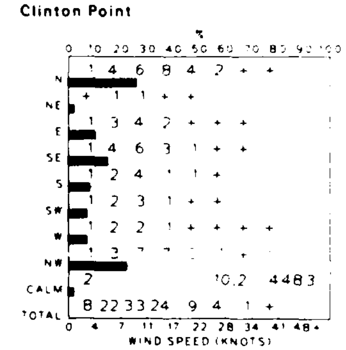
Lonely


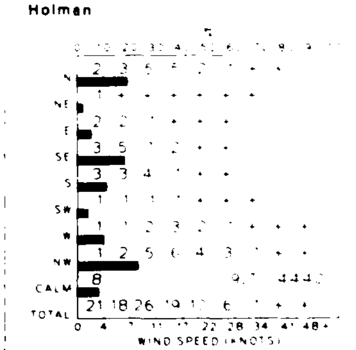
Oliktok


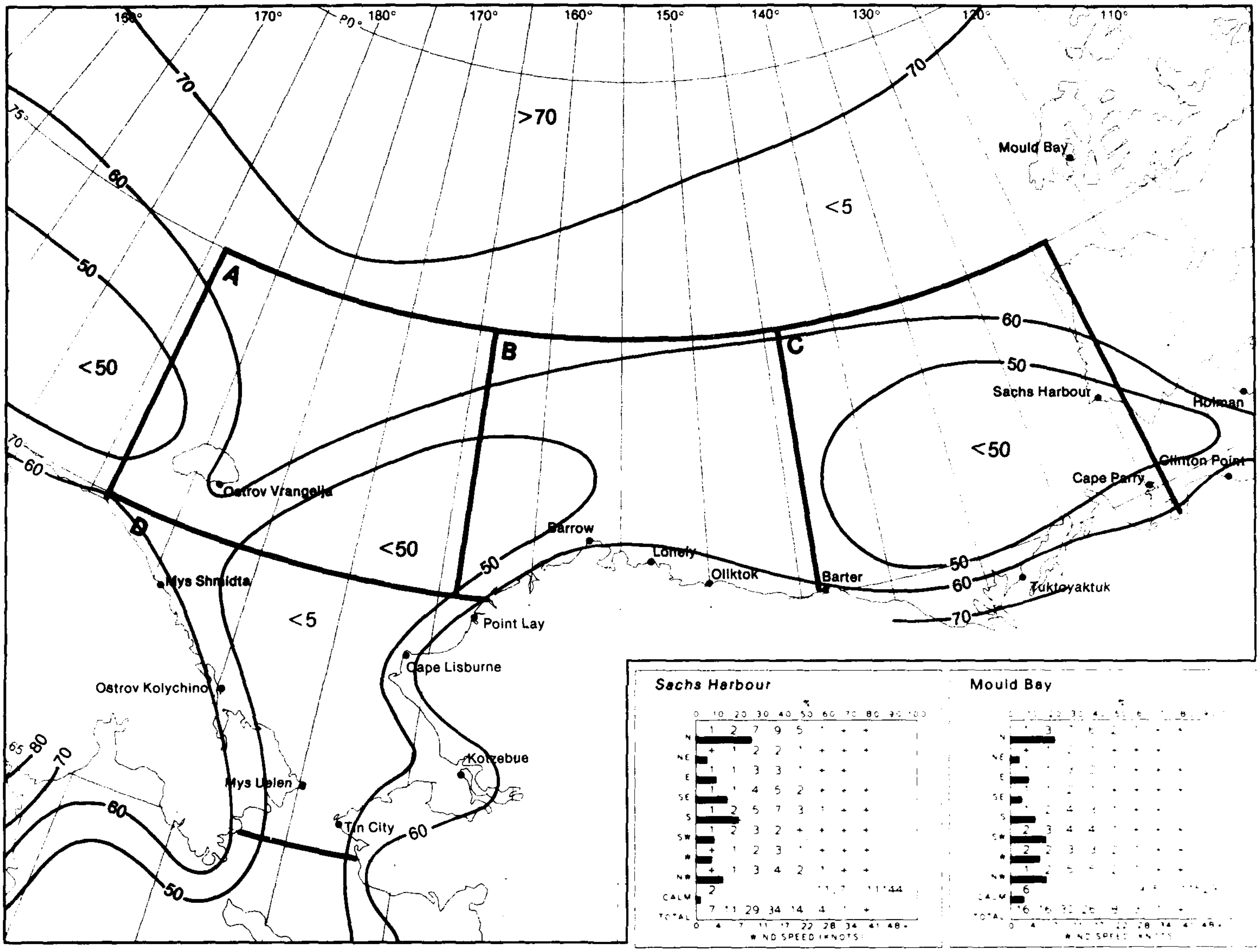
Barter


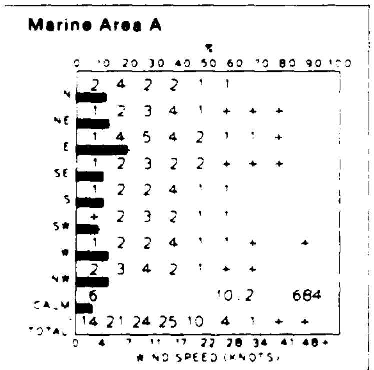
Tuktoyaktuk


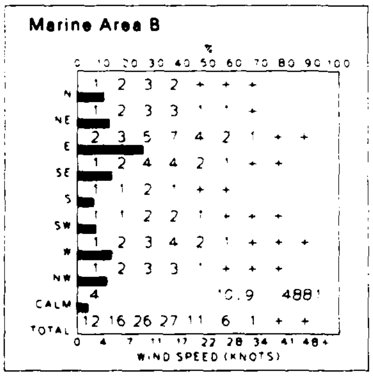
Cape Parry


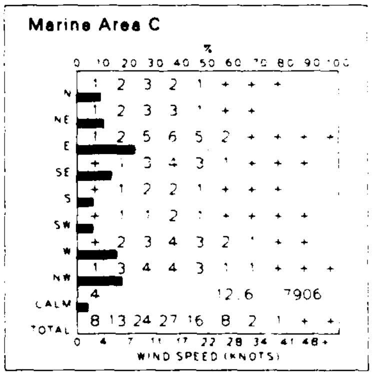
Clinton Point


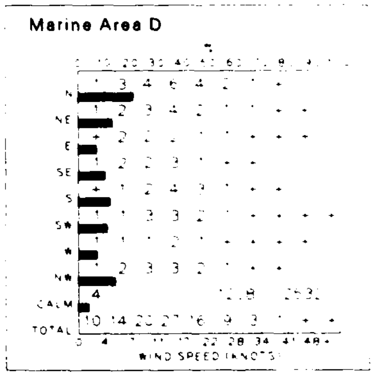
Holman




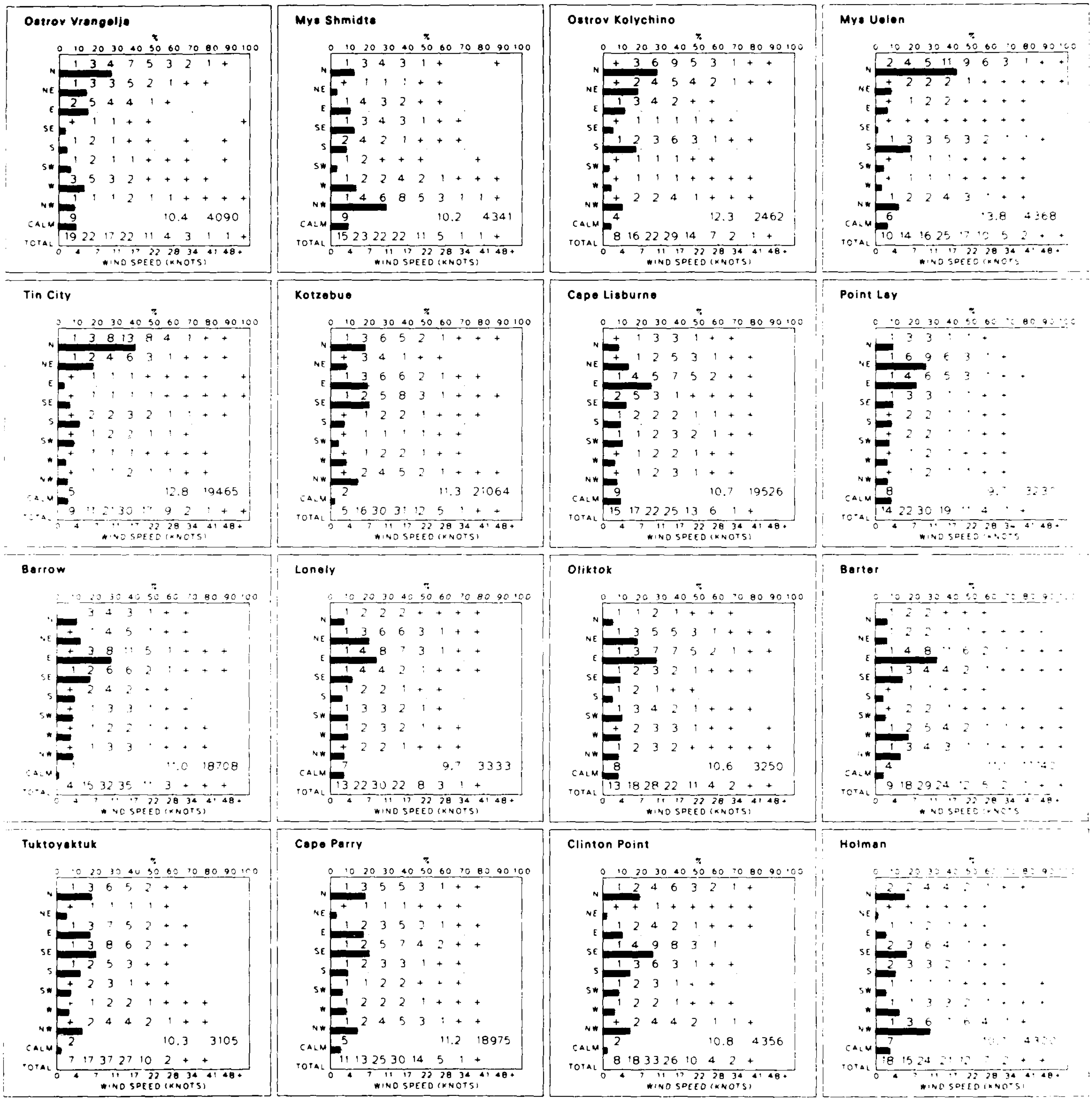


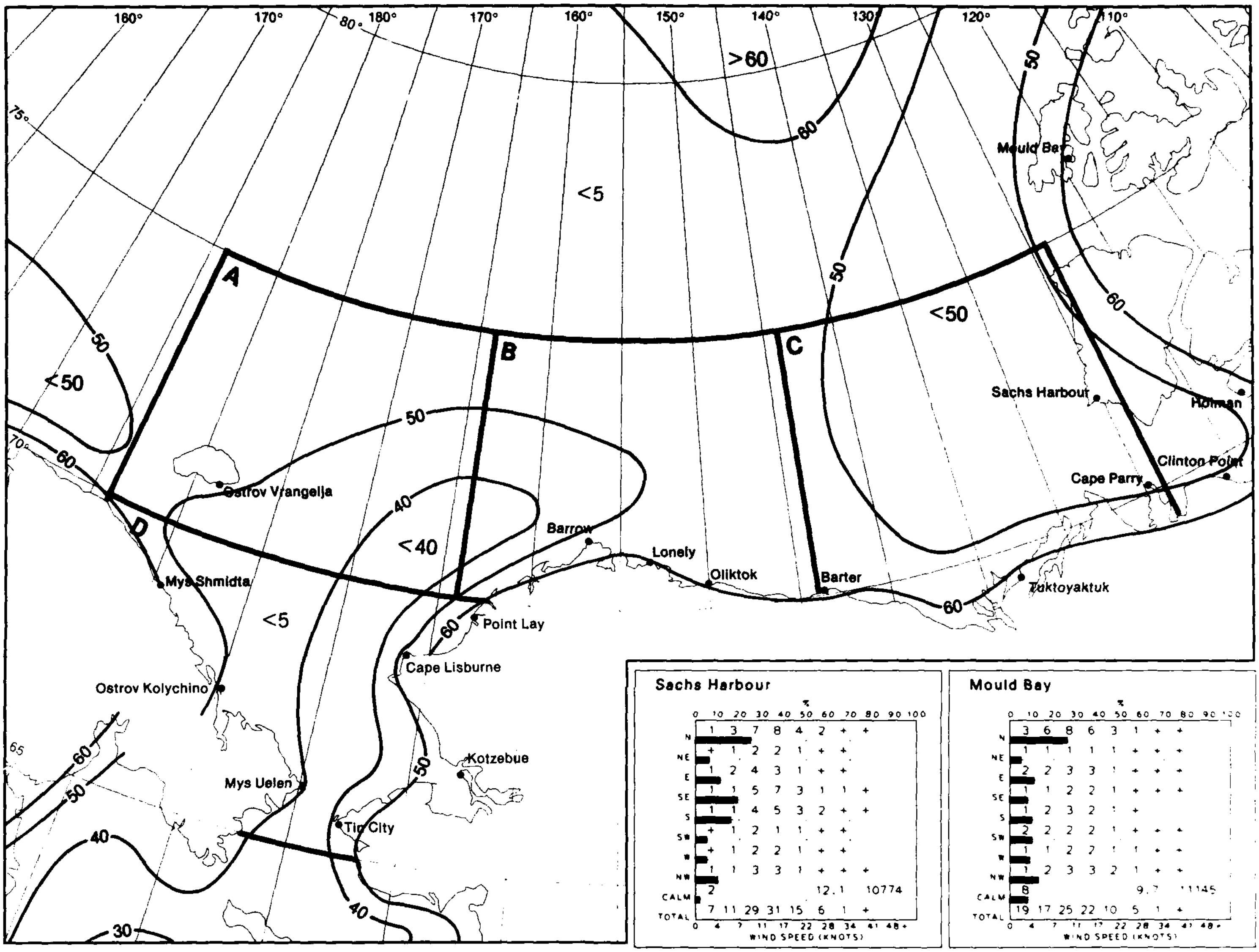






11 Wind Speed ≦10 and ≧34 Knots **August**


Ostrov Vrangelja
Mys Shmidta
Ostrov Kolychino
Mys Uelen
Tin City
Kotzebue
Cape Lisburne
Point Lay
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
Holman
%
WIND SPEED (KNOTS)
CALM
TOTAL



Sachs Harbour

WIND SPEED (KNOTS)	0–4	4–7	7–11	11–17	17–22	22–28	28–34	34–41	41–48	48+
N	1	3	7	8	4	2	+	+		
NE	+	1	2	2	1	+	+			
E	1	2	4	3	1	+	+			
SE	1	1	5	7	3	1	1	+		
S	1	1	4	5	3	2	+	+		
SW	+	1	2	1	1	+	+			
W	+	1	2	2	1	+	+			
NW	1	1	3	3	1	+	+	+		
CALM	2					12.1			10774	
TOTAL	7	11	29	31	15	6	1	+		

Mould Bay

WIND SPEED (KNOTS)	0–4	4–7	7–11	11–17	17–22	22–28	28–34	34–41	41–48	48+
N	3	6	8	6	3	1	+	+		
NE	1	1	1	1	1	+	+	+		
E	2	2	3	3	1	+	+	+		
SE	1	1	2	2	1	+	+	+		
S	1	2	3	2	1	+				
SW	2	2	2	2	1	+	+	+		
W	1	1	2	2	1	1	+	+		
NW	1	2	3	3	2	1	+	+		
CALM	8					9.7			11145	
TOTAL	19	17	25	22	10	5	1	+		

Marine Area A

WIND SPEED (KNOTS)	0–4	4–7	7–11	11–17	17–22	22–28	28–34	34–41	41–48	48+
N	1	1	2	4	3	1	+		+	
NE	2	1	4	5	4	2	1	+	+	
E	1	3	5	6	3	3	2	+	+	
SE	1	3	2	3	1	+	+			
S	1	1	1	1	+	1				
SW	1	1	1	2	+	+	+			
W	1	1	2	2	1	1		+	+	
NW	1	1	1	3	2	2	+			
CALM	4					12.8			844	
TOTAL	12	13	19	26	16	10	3	1	+	

Marine Area B

WIND SPEED (KNOTS)	0–4	4–7	7–11	11–17	17–22	22–28	28–34	34–41	41–48	48+
N	1	2	3	3	1	1	+	+		
NE	1	2	4	5	3	1	+	+		
E	1	2	5	8	5	2	+	+		
SE	1	2	3	3	1	1	+			
S	1	1	2	2	+	1	+		+	
SW	1	1	2	2	1	1	+	+		+
W	1	2	3	3	1	1	+	+	+	+
NW	1	1	2	3	1	1	+	+	+	+
CALM	4					12.2			2546	
TOTAL	10	13	23	29	14	8	2	1	+	+

Marine Area C

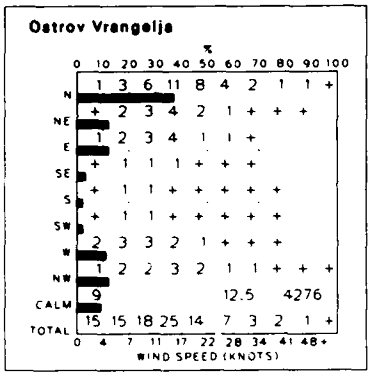
WIND SPEED (KNOTS)	0–4	4–7	7–11	11–17	17–22	22–28	28–34	34–41	41–48	48+
N	1	1	3	2	1	1	+	+		
NE	+	2	2	3	2	2	+	+		
E	1	2	4	8	7	5	2	+		
SE	+	1	2	3	2	1	+	+		+
S	+	1	1	1	1	+	+	+		
SW	+	1	2	1	1	+	+	+		
W	+	1	3	2	1	1	+	+		
NW	1	2	4	4	2	1	+	+	+	+
CALM	5					13.5			7340	
TOTAL	9	12	21	26	17	11	4	1	+	+

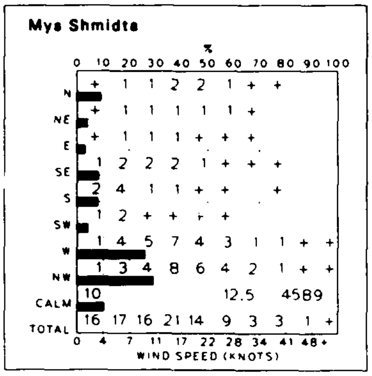
Marine Area D

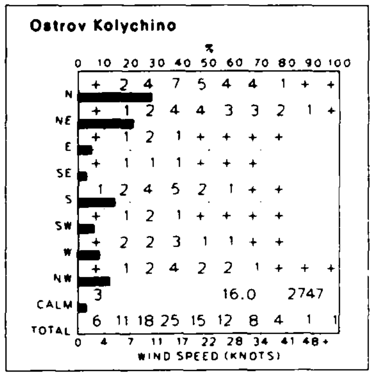
WIND SPEED (KNOTS)	0–4	4–7	7–11	11–17	17–22	22–28	28–34	34–41	41–48	48+
N	1	1	3	6	4	3	1	1	+	
NE	1	1	3	4	3	2	1	1	+	
E	1	1	3	2	1	1	1	+		
SE	1	1	2	2	1	1	+	+	+	+
S	1	2	2	2	2	1	+	+	+	
SW	+	1	2	2	1	1	1	+	+	+
W	+	1	2	2	1	1	+	+		+
NW	1	2	3	4	3	2	1	1	+	
CALM	4					14.4			2250	
TOTAL	10	11	18	24	16	12	5	3	1	+

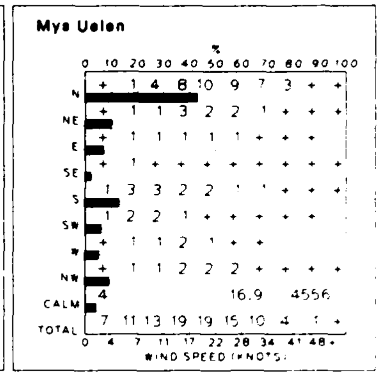
11 Wind Speed ≦10 and ≧34 Knots

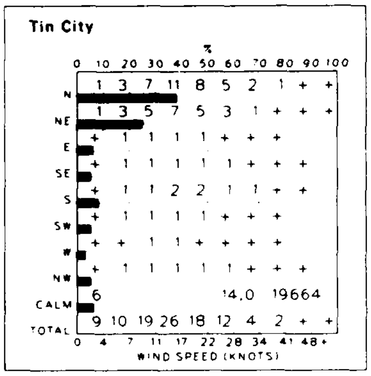
September

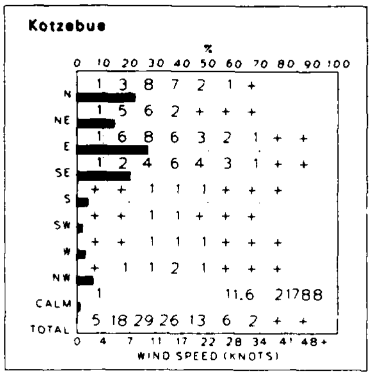

Ostrov Vrangelja
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 6 11 8 4 2 1 1 +
NE + 2 3 4 2 1 + + +
E 1 2 3 4 1 1 +
SE + 1 1 1 + + +
S + 1 1 + + + + +
SW + 1 1 + + + + +
W 2 3 3 2 1 + + +
NW 1 2 2 3 2 1 1 + + +
CALM 9 12.5 4276
TOTAL 15 15 18 25 14 7 3 2 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

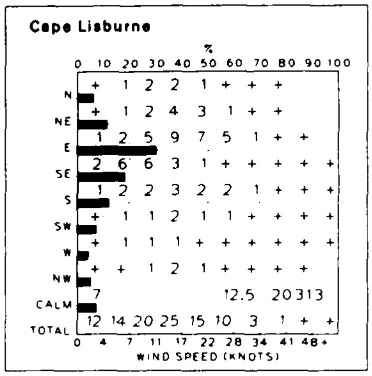

Mys Shmidta
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 1 2 2 1 + +
NE + 1 1 1 1 1 1 +
E + 1 1 1 + + +
SE 1 2 2 2 1 + + +
S 2 4 1 1 + + +
SW 1 2 + + + +
W 1 4 5 7 4 3 1 1 + +
NW 1 3 4 8 6 4 2 1 + +
CALM 10 12.5 4589
TOTAL 16 17 16 21 14 9 3 3 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

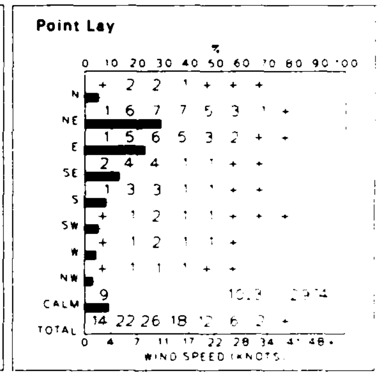

Ostrov Kolychino
%
0 10 20 30 40 50 60 70 80 90 100
N + 2 4 7 5 4 4 1 + +
NE + 1 2 4 4 3 3 2 1 +
E + 1 2 1 + + + +
SE + 1 1 1 + + +
S 1 2 4 5 2 1 + +
SW + 1 2 1 + + + +
W + 2 2 3 1 1 + +
NW + 1 2 4 2 2 1 + + +
CALM 3 16.0 2747
TOTAL 6 11 18 25 15 12 8 4 1 1
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

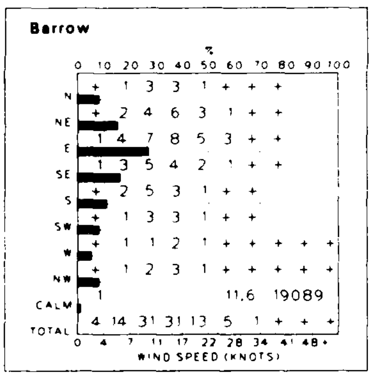

Mys Uelen
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 4 8 10 9 7 3 + +
NE + 1 1 3 2 2 1 + +
E + 1 1 1 1 1 + + +
SE + 1 + + + + + + +
S 1 3 3 2 2 + + +
SW 1 2 2 1 + + + +
W + 1 1 2 1 + +
NW + 1 1 2 2 2 + + + +
CALM 4 16.9 4556
TOTAL 7 11 13 19 19 15 10 4 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

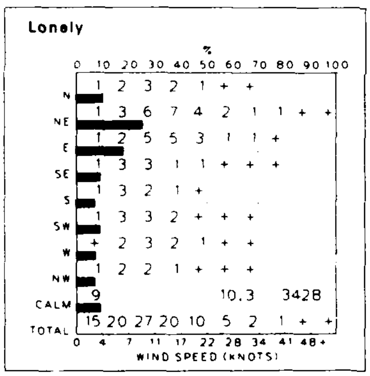

Tin City
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 7 11 8 5 2 1 + +
NE 1 3 5 7 5 3 1 + + +
E + 1 1 1 1 + + +
SE + 1 1 1 1 1 + + +
S + 1 1 2 2 1 1 + +
SW + 1 1 1 1 + + +
W + + 1 1 + + + +
NW + 1 1 1 1 1 + + +
CALM 6 14.0 19664
TOTAL 9 10 19 26 18 12 4 2 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

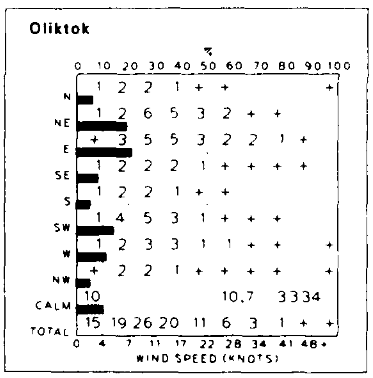

Kotzebue
%
0 10 20 30 40 50 60 70 80 90 100
N 1 3 8 7 2 1 +
NE 1 5 6 2 + + +
E 1 6 8 6 3 2 1 + +
SE 1 2 4 6 4 3 1 + +
S + + 1 1 1 + + +
SW + + 1 1 + + +
W + + 1 1 1 + + +
NW + 1 1 2 1 + + +
CALM 1 11.6 21788
TOTAL 5 18 29 26 13 6 2 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

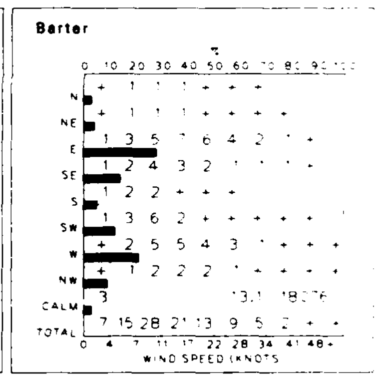

Cape Lisburne
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 2 2 1 + + +
NE + 1 2 4 3 1 + +
E 1 2 5 9 7 5 1 + +
SE 2 6 6 3 1 + + + + +
S 1 2 2 3 2 2 1 + + +
SW + 1 1 2 1 1 + + + +
W + 1 1 1 + + + + + +
NW + + 1 2 1 + + + +
CALM 7 12.5 20313
TOTAL 12 14 20 25 15 10 3 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

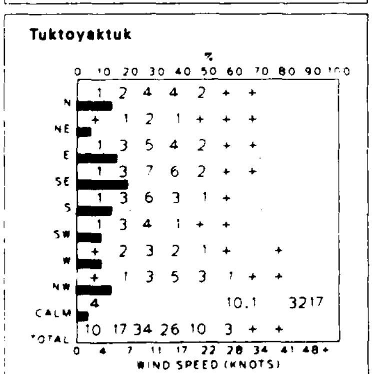

Point Lay
%
0 10 20 30 40 50 60 70 80 90 100
N + 2 2 1 + + +
NE 1 6 7 7 5 3 1 +
E 1 5 6 5 3 2 + +
SE 2 4 4 1 1 + +
S 1 3 3 1 1 + +
SW + 1 2 1 1 + + +
W + 1 2 1 1 +
NW + 1 1 1 + +
CALM 9
TOTAL 14 22 26 18 12 6 2 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

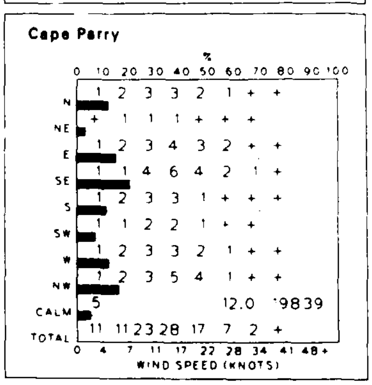

Barrow
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 3 3 1 + + +
NE + 2 4 6 3 1 + +
E 1 4 7 8 5 3 + +
SE 1 3 5 4 2 1 + +
S + 2 5 3 1 + +
SW + 1 3 3 1 + +
W + 1 1 2 1 + + + + +
NW + 1 2 3 1 + + + + +
CALM 1 11.6 19089
TOTAL 4 14 31 31 13 5 1 + + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

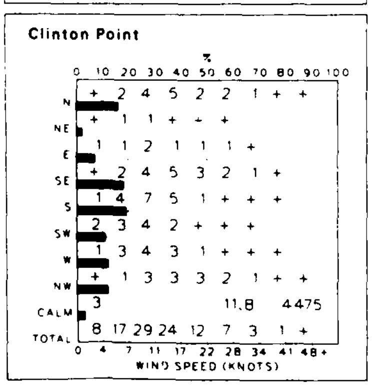

Lonely
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 3 2 1 + +
NE 1 3 6 7 4 2 1 1 + +
E 1 2 5 5 3 1 1 +
SE 1 3 3 1 1 + + +
S 1 3 2 1 +
SW 1 3 3 2 + + +
W + 2 3 2 1 + +
NW 1 2 2 1 + + +
CALM 9 10.3 3428
TOTAL 15 20 27 20 10 5 2 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

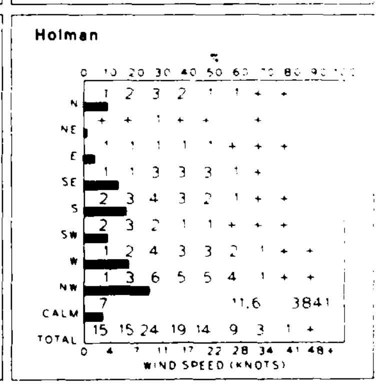

Oliktok
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 2 1 + + +
NE 1 2 6 5 3 2 + +
E + 3 5 5 3 2 2 1 +
SE 1 2 2 2 1 + + + +
S 1 2 2 1 + +
SW 1 4 5 3 1 + + +
W 1 2 3 3 1 1 + + +
NW + 2 2 1 + + + + +
CALM 10 10.7 3334
TOTAL 15 19 26 20 11 6 3 1 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

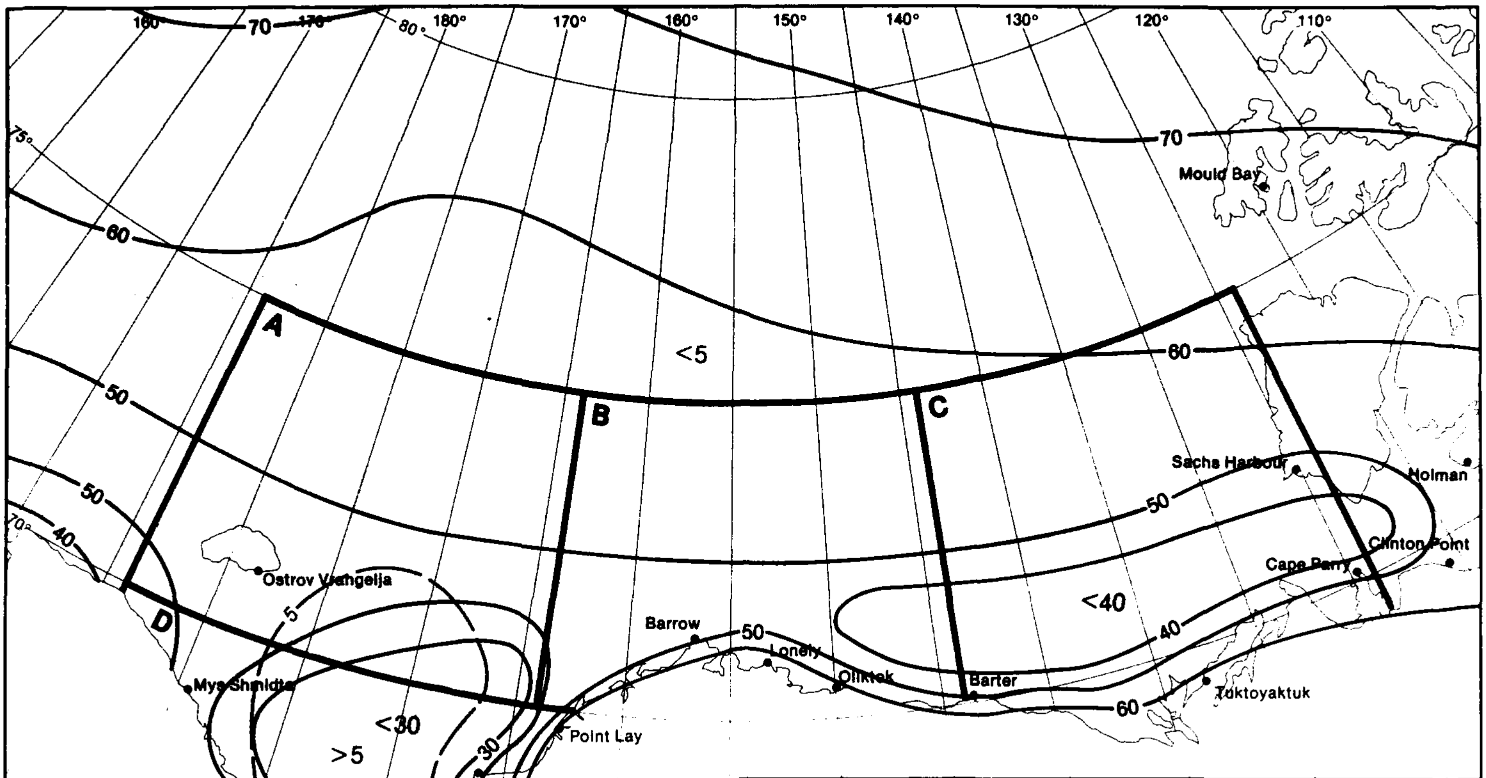

Barter
%
0 10 20 30 40 50 60 70 80 90 100
N + 1 1 1 + + +
NE + 1 1 1 + + + +
E 1 3 5 7 6 4 2 1 +
SE 1 2 4 3 2 1 1 +
S 1 2 2 + + +
SW 1 3 6 2 + + + + +
W + 2 5 5 4 3 1 + + +
NW + 1 2 2 2 1 + + + +
CALM 3 13.1 18276
TOTAL 7 15 28 21 13 9 5 2 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

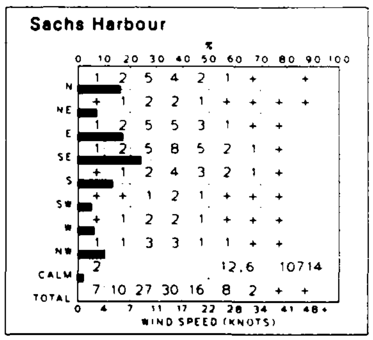

Tuktoyaktuk
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 4 4 2 + +
NE + 1 2 1 + + +
E 1 3 5 4 2 + +
SE 1 3 7 6 2 + +
S 1 3 6 3 1 +
SW 1 3 4 1 + +
W + 2 3 2 1 + +
NW + 1 3 5 3 1 + +
CALM 4 10.1 3217
TOTAL 10 17 34 26 10 3 + +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

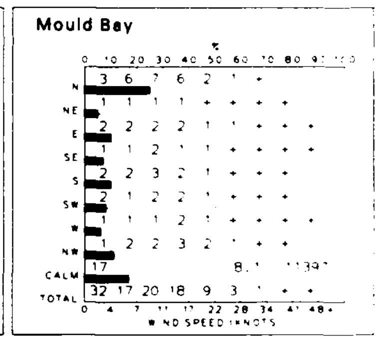

Cape Parry
%
0 10 20 30 40 50 60 70 80 90 100
N 1 2 3 3 2 1 + +
NE + 1 1 1 + + +
E 1 2 3 4 3 2 + +
SE 1 1 4 6 4 2 1 +
S 1 2 3 3 1 + + +
SW 1 1 2 2 1 + +
W 1 2 3 3 2 1 + +
NW 1 2 3 5 4 1 + +
CALM 5 12.0 19839
TOTAL 11 11 23 28 17 7 2 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

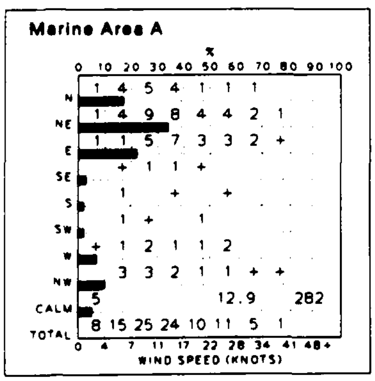

Clinton Point
%
0 10 20 30 40 50 60 70 80 90 100
N + 2 4 5 2 2 1 + +
NE + 1 1 + + +
E 1 1 2 1 1 1 +
SE + 2 4 5 3 2 1 +
S 1 4 7 5 1 + + +
SW 2 3 4 2 + + +
W 1 3 4 3 1 + + +
NW + 1 3 3 3 2 1 + +
CALM 3 11.8 4475
TOTAL 8 17 29 24 12 7 3 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

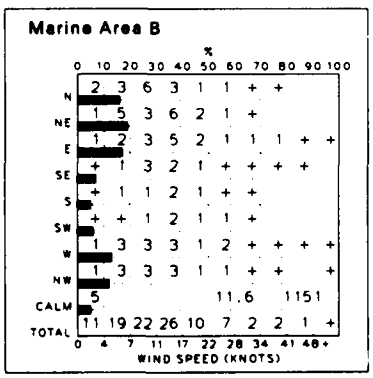

Holman
%
N 1 2 3 2 1 1 + +
NE + + 1 + + +
E 1 1 1 1 + + +
SE 1 1 3 3 3 1 +
S 2 3 4 3 2 1 + +
SW 2 3 2 1 + + +
W 1 2 4 3 3 2 1 + +
NW 1 3 6 5 5 4 1 + +
CALM 7 11.6 3841
TOTAL 15 15 24 19 14 9 3 1 +
0 4 7 11 17 22 28 34 41 48+
WIND SPEED (KNOTS)

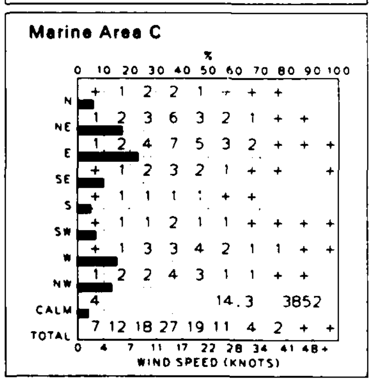


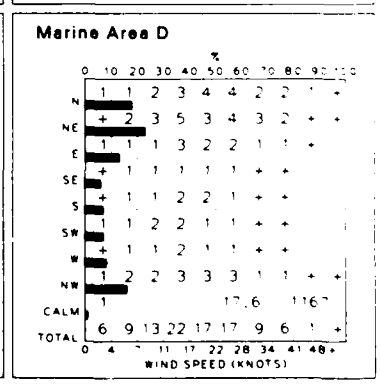




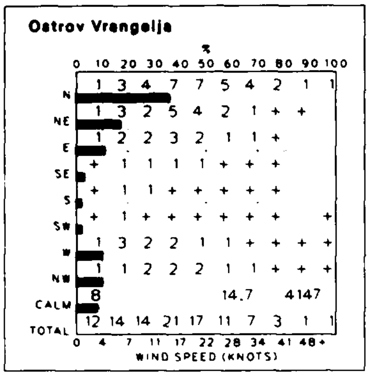


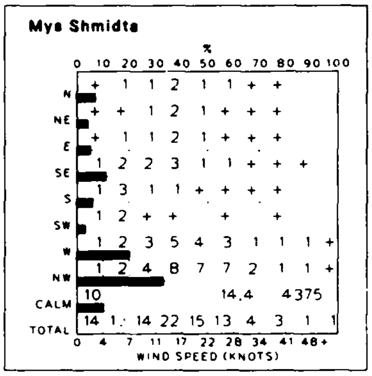


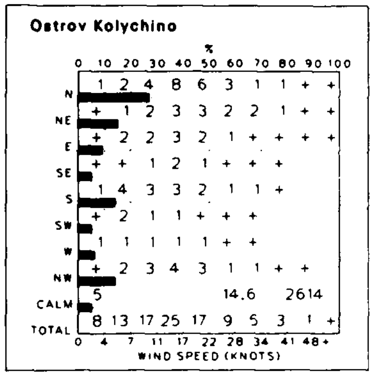


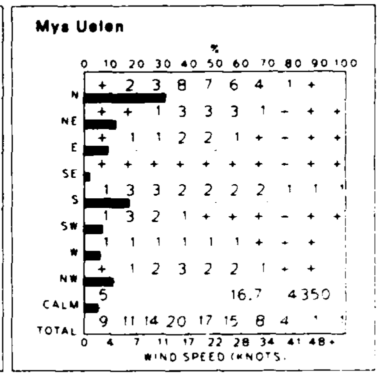


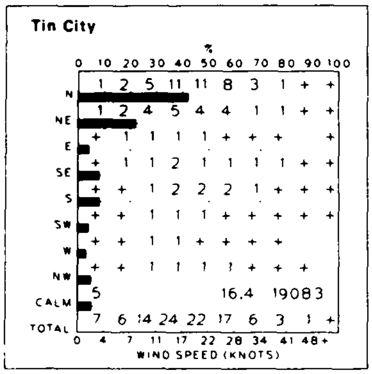
11 Wind Speed ≦10 and ≧34 Knots **October**

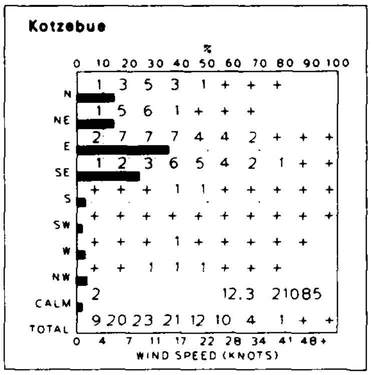

Ostrov Vrangelja

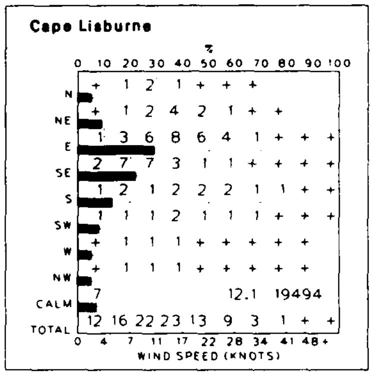

Mys Shmidta

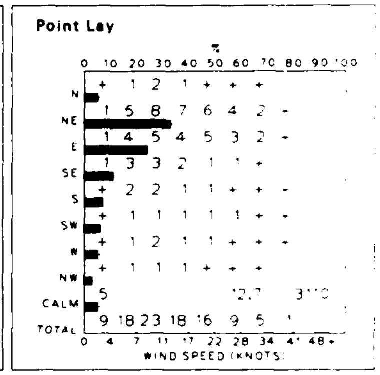

Ostrov Kolychino


Mys Uelen


Tin City


Kotzebue


Cape Lisburne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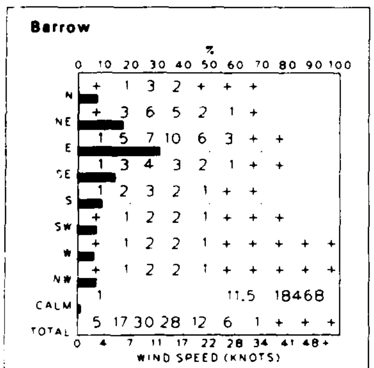
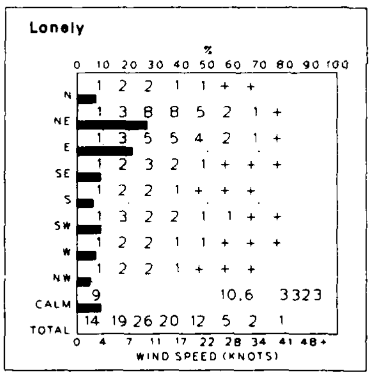

Barrow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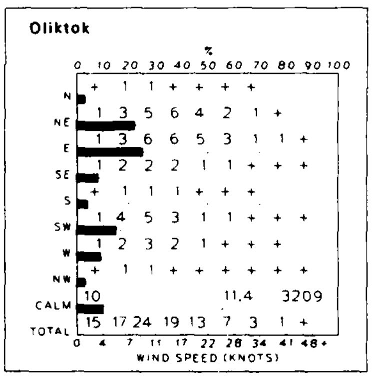
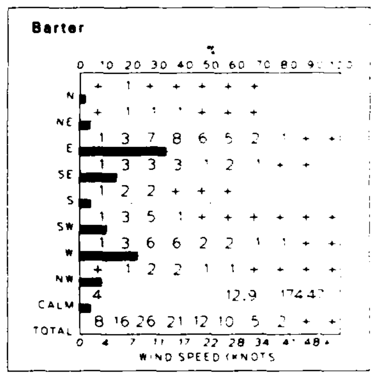
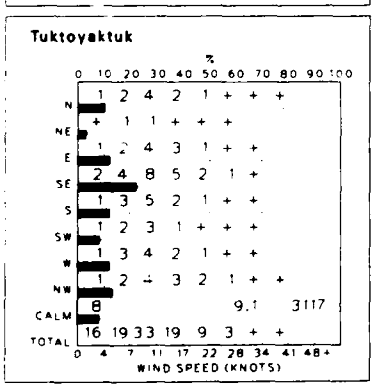

Oliktok


Barter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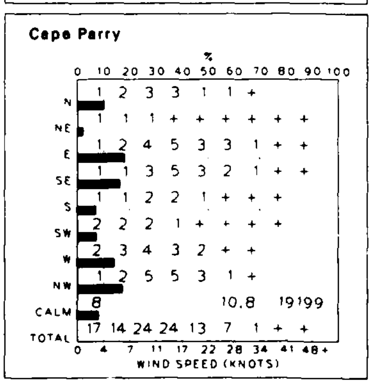
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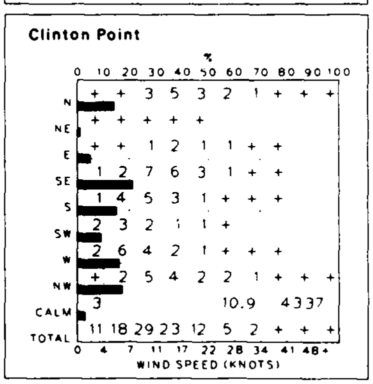
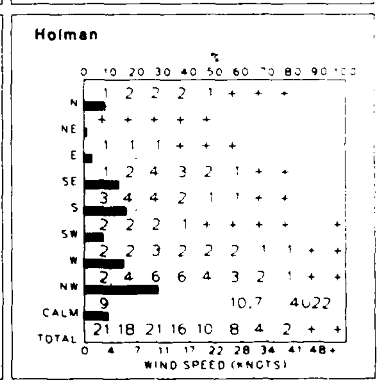
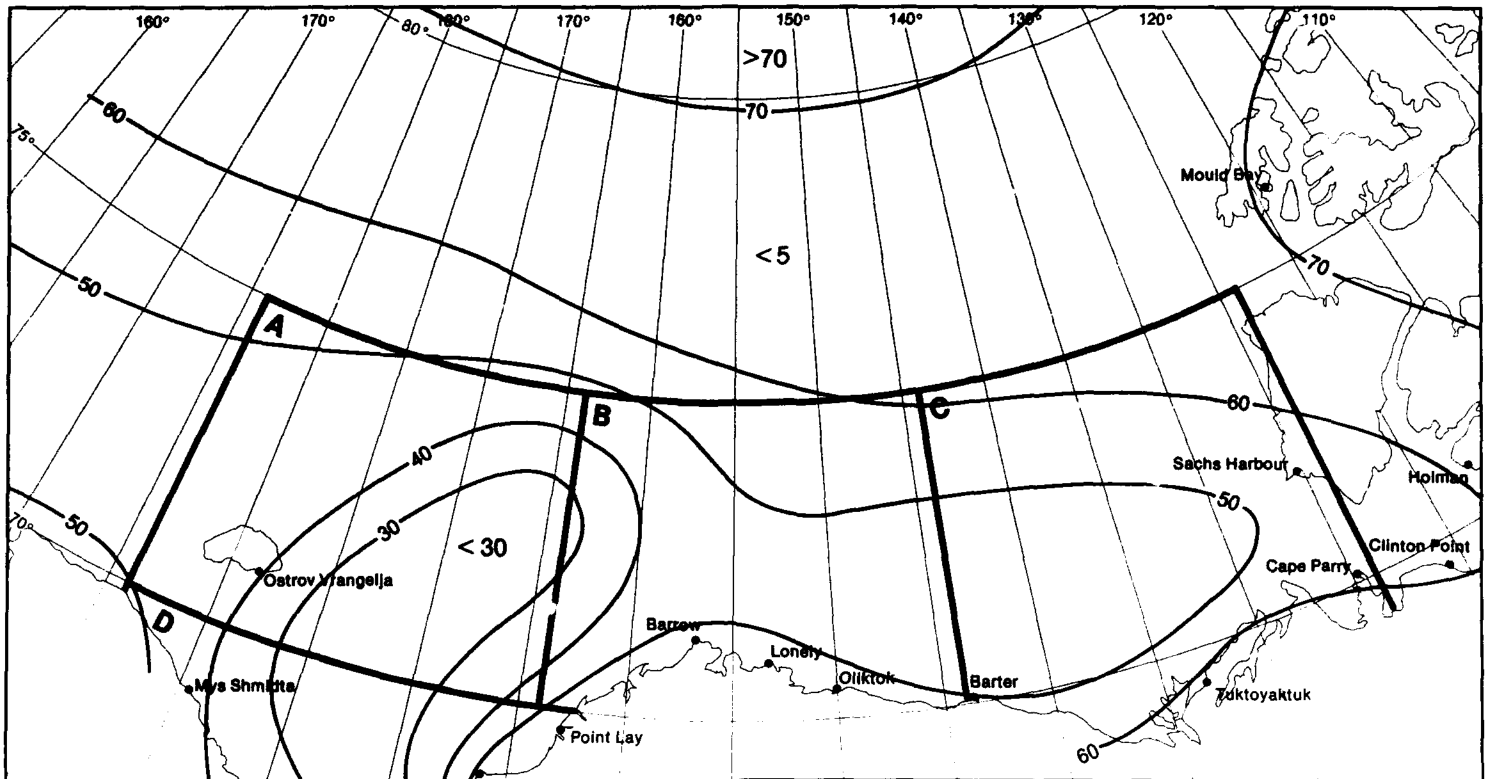
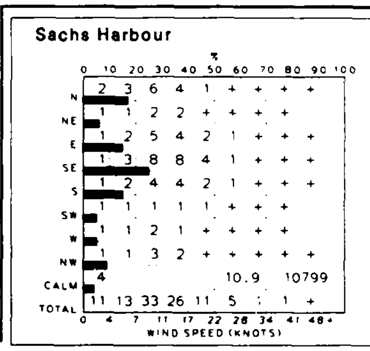
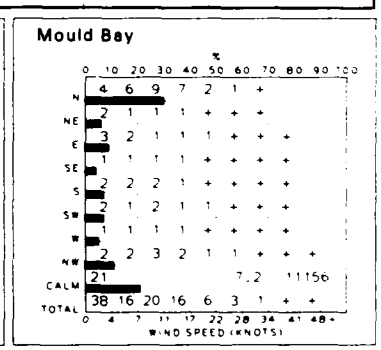
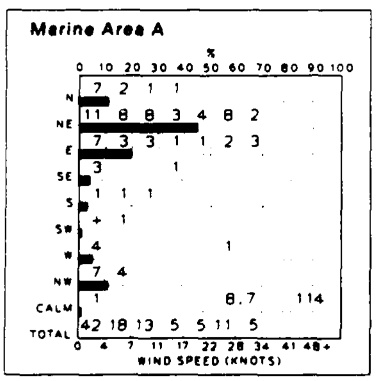

Clinton Point

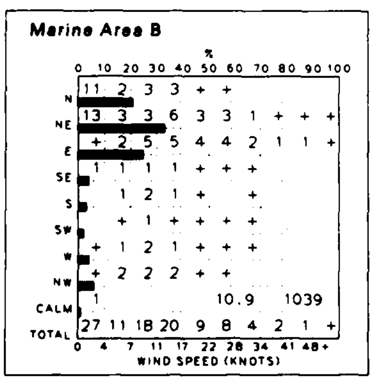

Holman

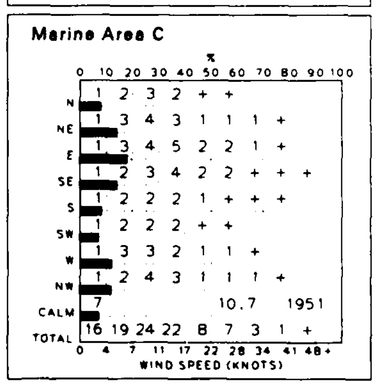


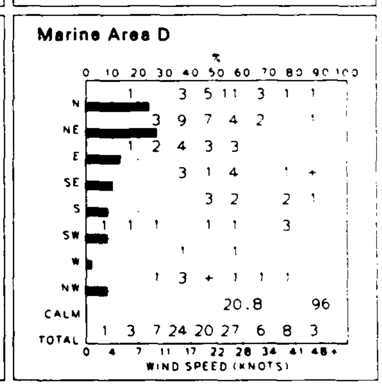




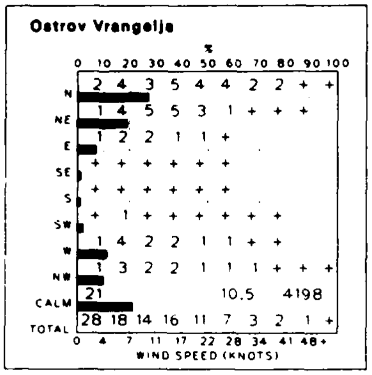


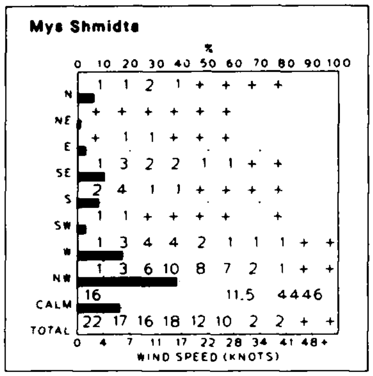


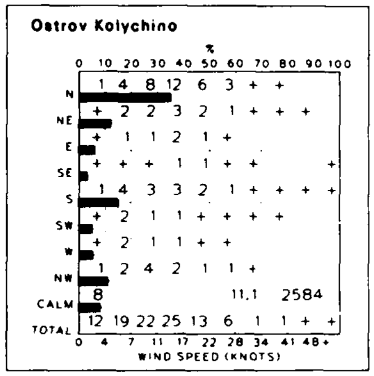


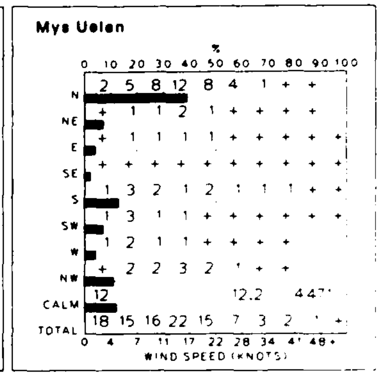


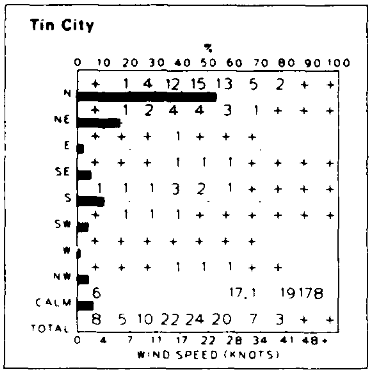
11 Wind Speed ≦10 and ≧34 Knots **November**

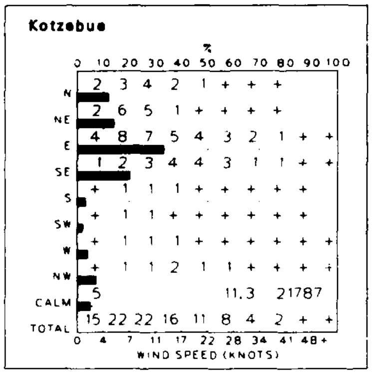

Ostrov Vrangelja

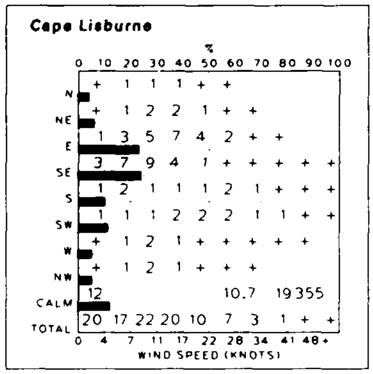

Mys Shmidta

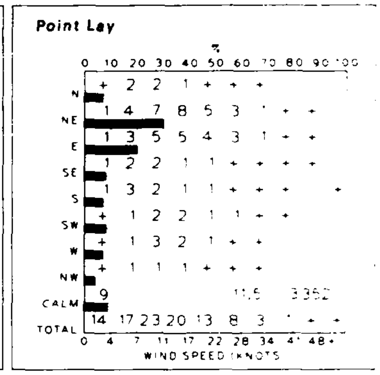

Ostrov Kolychino

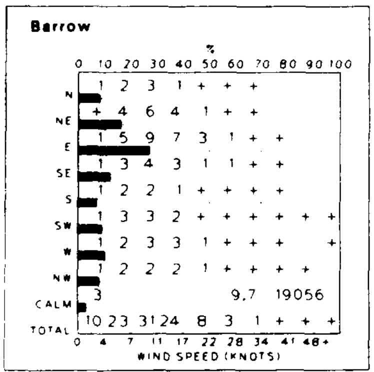

Mys Uelen

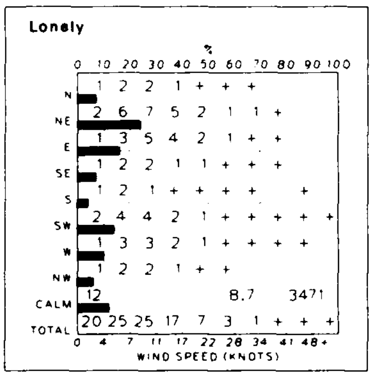

Tin City

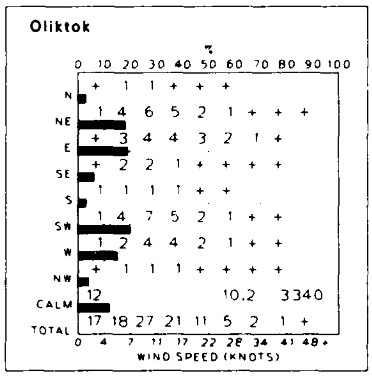

Kotzebue

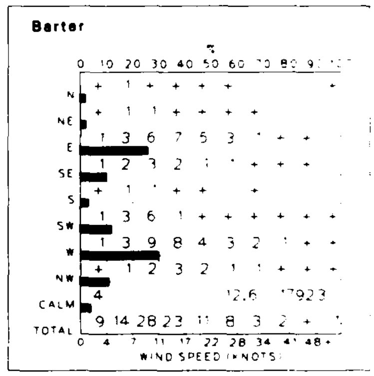

Cape Lisburne

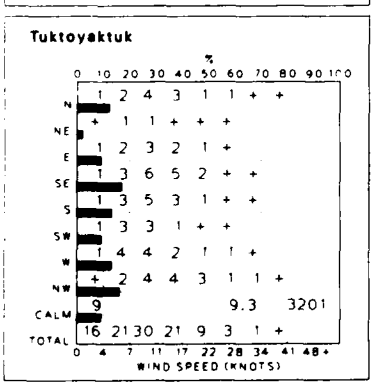

Point Lay

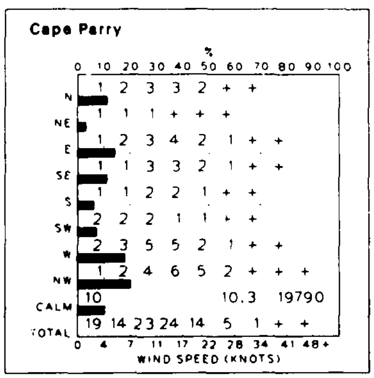

Barrow

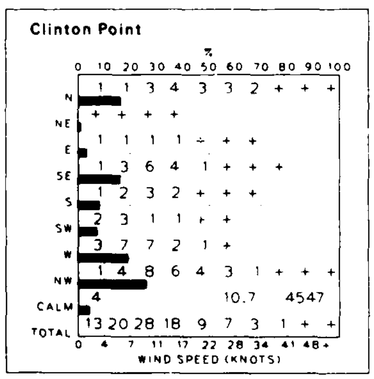

Lonely

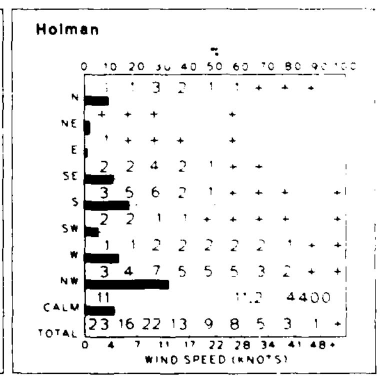

Oliktok

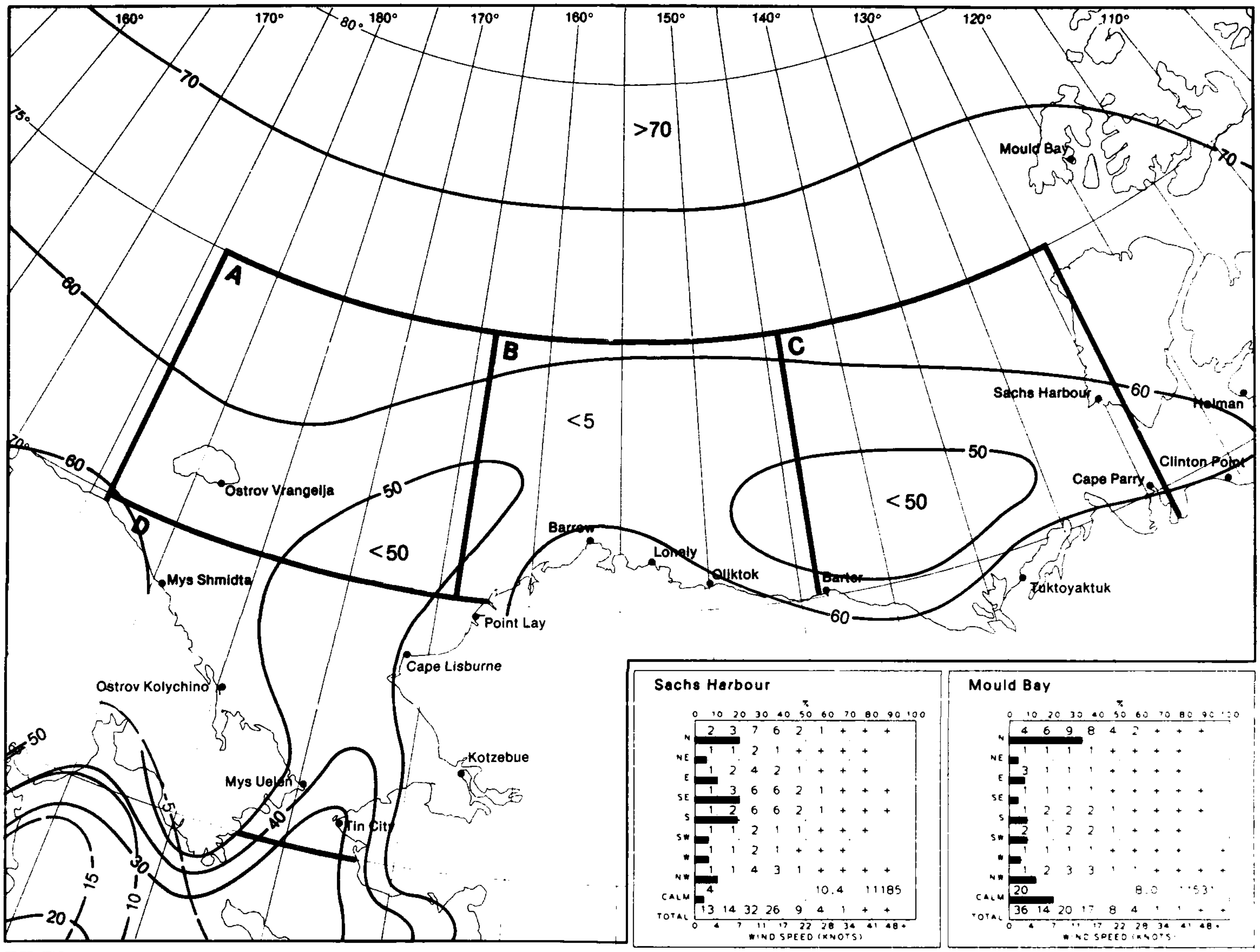

Barter

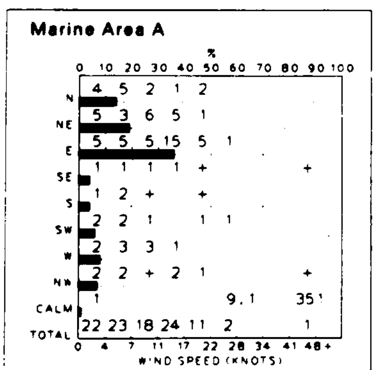

Tuktoyaktuk

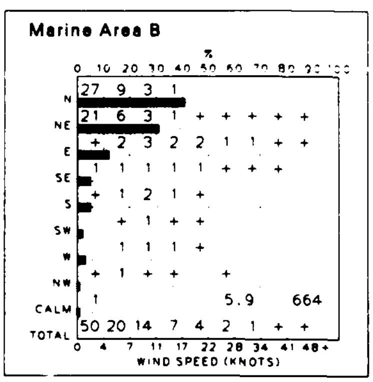

Cape Parry

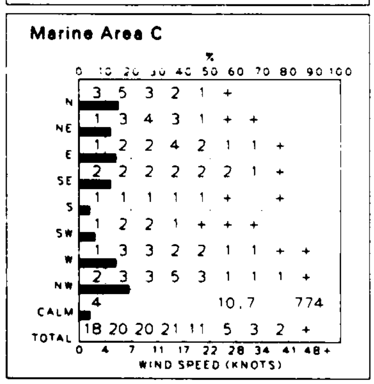

Clinton Point

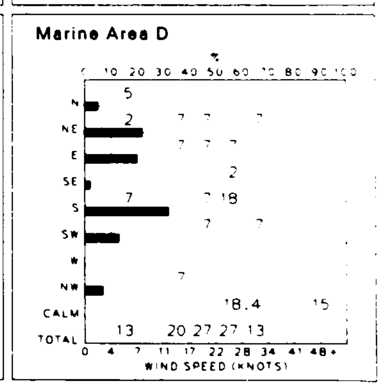

Holman











11 Wind Speed ≦10 and ≧34 Knots

December

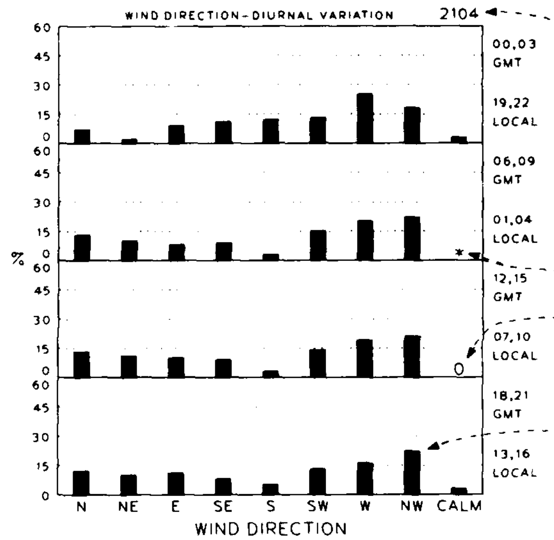
Map 12. Wind speed 11-21 and 22-33 knots

BLACK LINE – Percent frequency of wind speed 11–21 knots.

BLUE LINE – Percent frequency of wind speed 22–33 knots.

Albers Equal–Area Conic Projection

Graphs: Wind direction/diurnal variation



Number of observations.

Bars show percent frequency of wind direction (8 pts.) by hour (GMT and Local Time). Data are based on 100% for each hour-group.

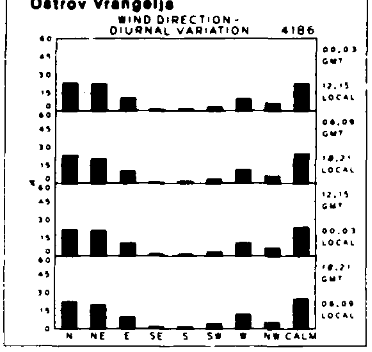
*** indicates <.05% but >0.**

0 indicates no observations in the category.

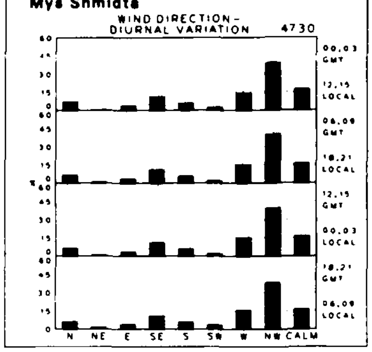
(22% of the wind observations for the hours 18 and 21 GMT (13 and 16 Local Time) had a direction from the northwest.)

The historical marine data file at the NCDC is made up of data collected and recorded since 1854 in several different units of measurement. Wind direction has been recorded over the years in the 16-, 32-, and 36-point scale. A reduced biasing system was employed in converting wind direction to the 8-point scale used in this atlas. This method attached weighting values to observations which overlap two different 8-point sectors and treats them as "fractional observation counts."

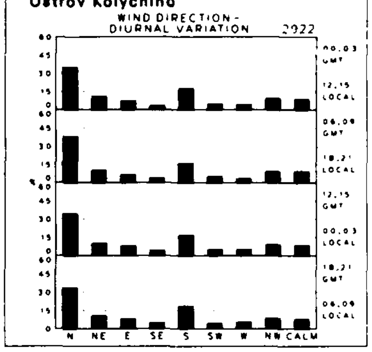
Ostrov Vrangelja



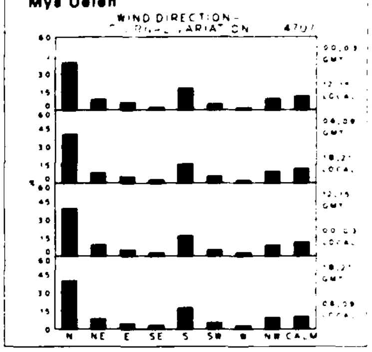
Mys Shmidta



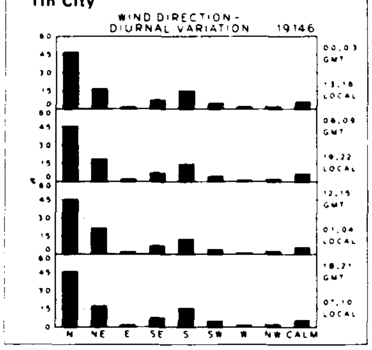
Ostrov Kolychino



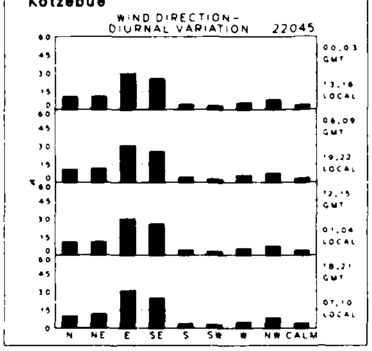
Mys Uelen



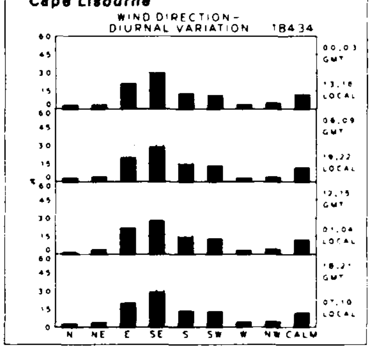
Tin City



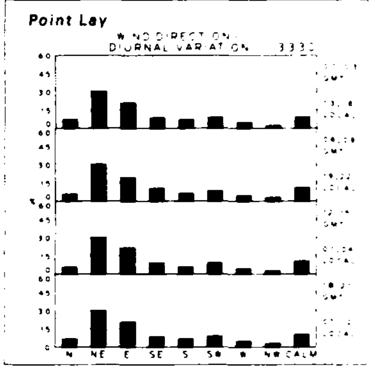
Kotzebue



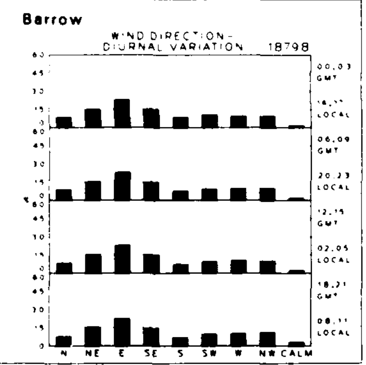
Cape Lisburne



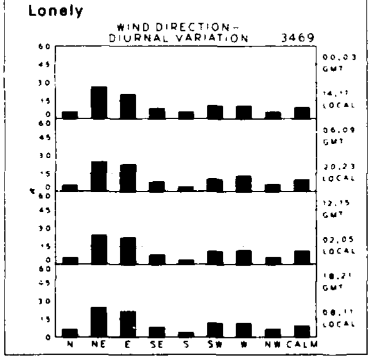
Point Lay



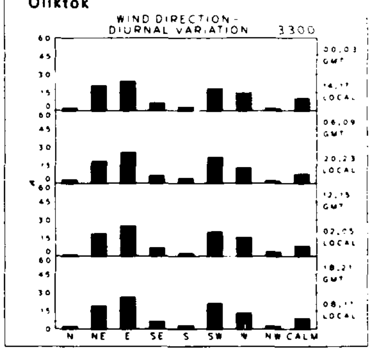
Barrow



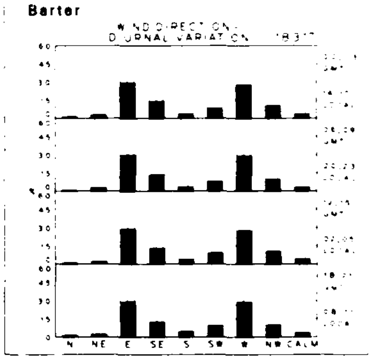
Lonely



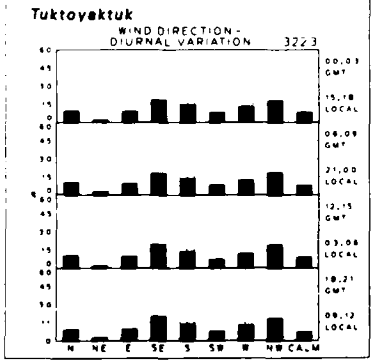
Oliktok



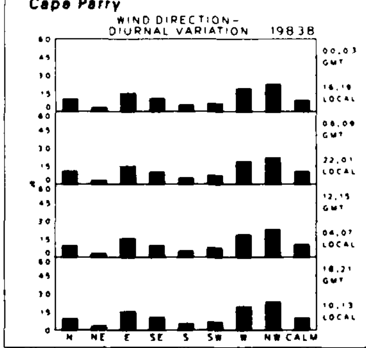
Barter



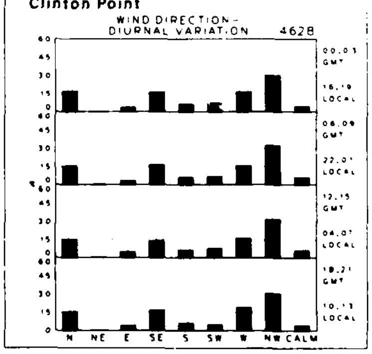
Tuktoyaktuk



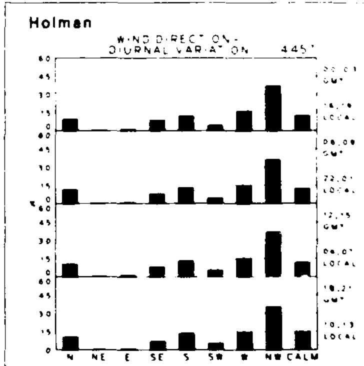
Cape Parry

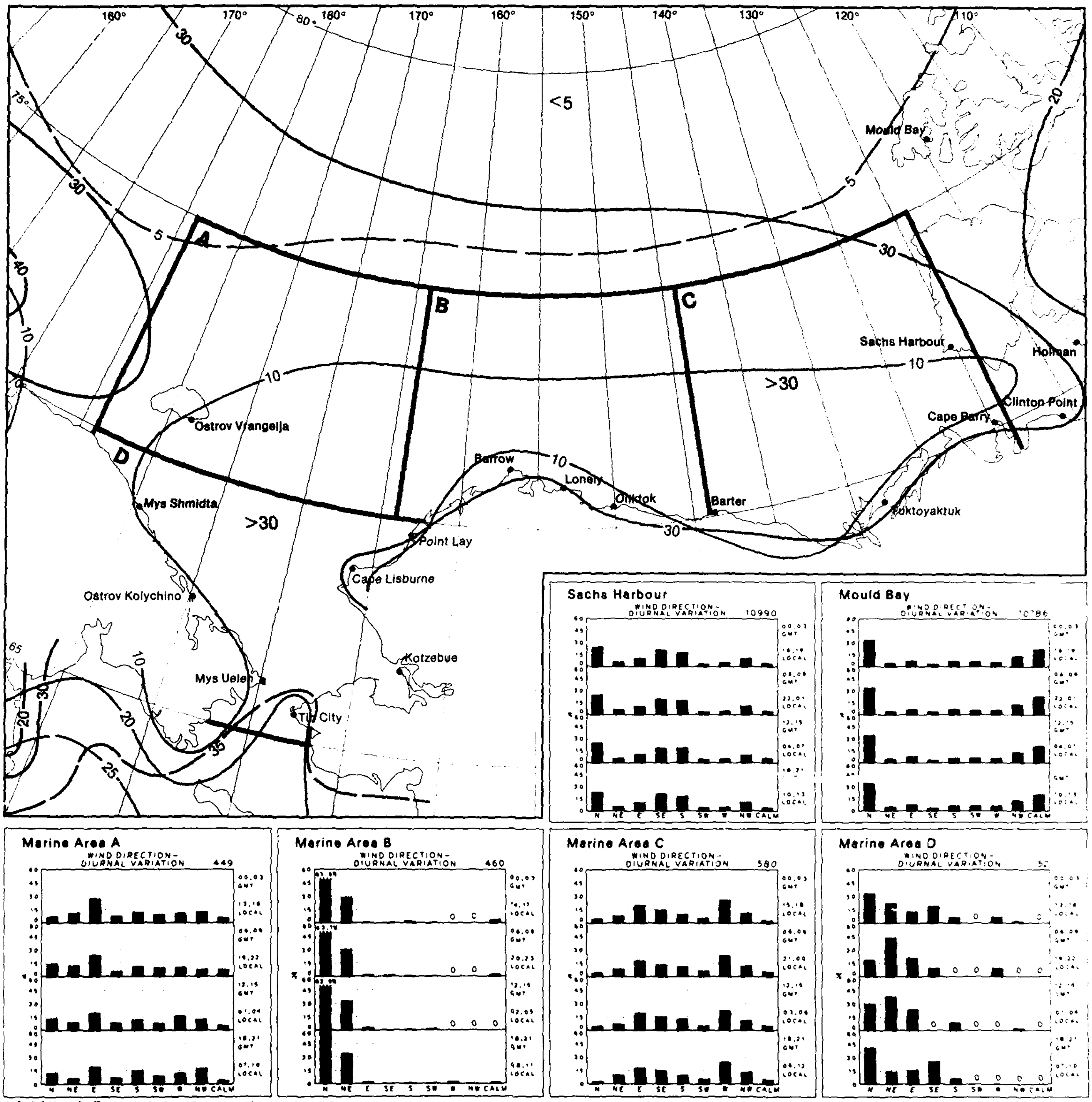


Clinton Point



Holmen

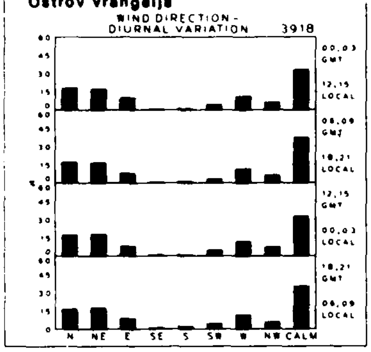




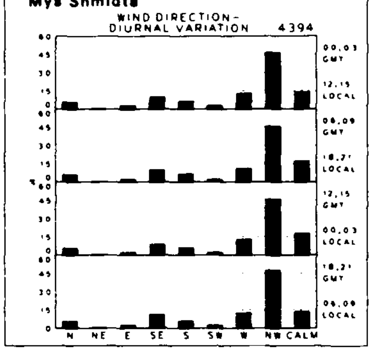
12 Wind Speed 11-21 and 22-33 Knots

January

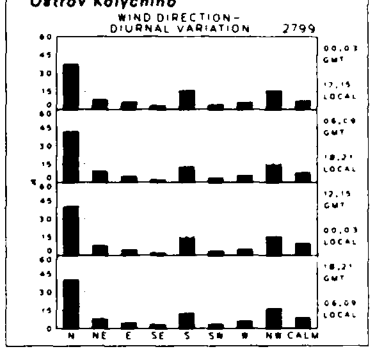
Ostrov Vrangelja



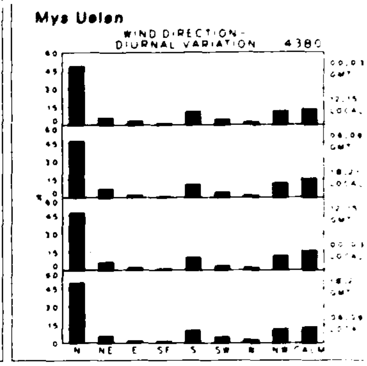
Mys Shmidta



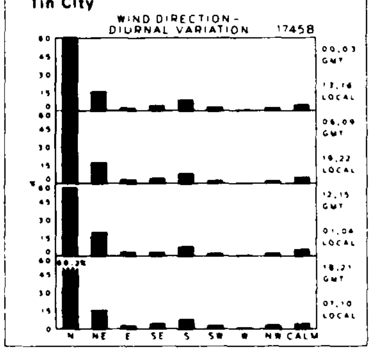
Ostrov Kolychino



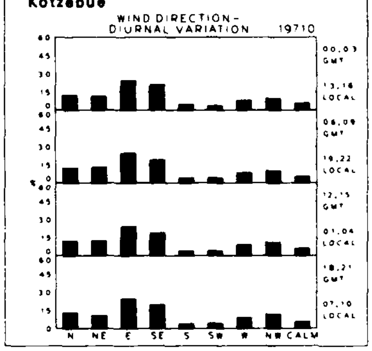
Mys Uelen



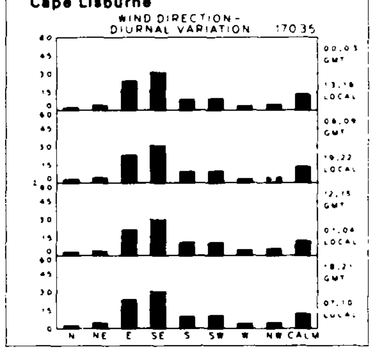
Tin City



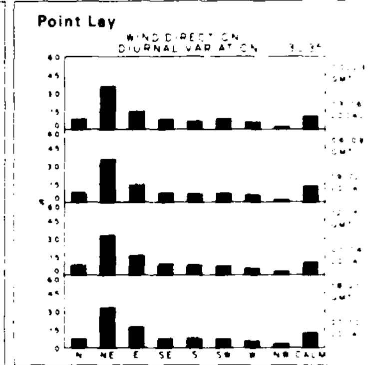
Kotzebue



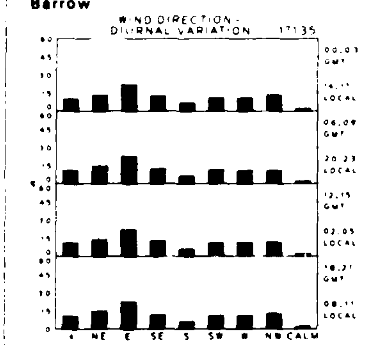
Cape Lisburne



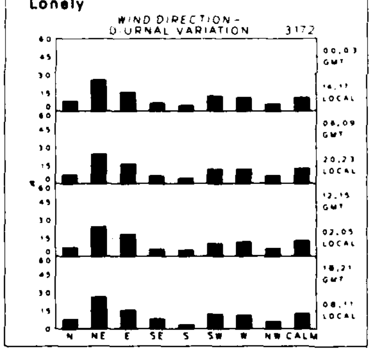
Point Lay



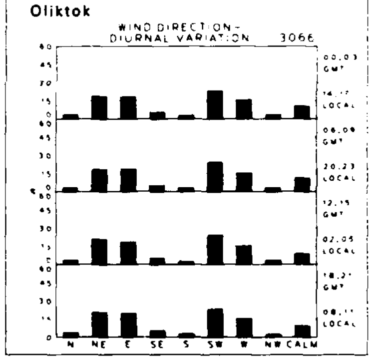
Barrow



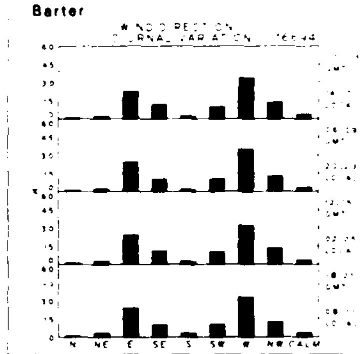
Lonely



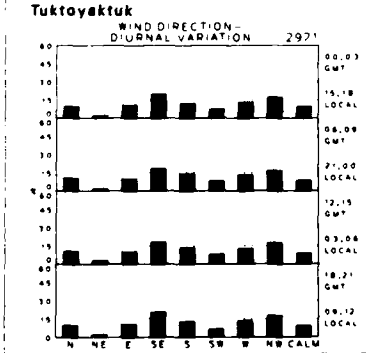
Oliktok



Barter



Tuktoyaktuk



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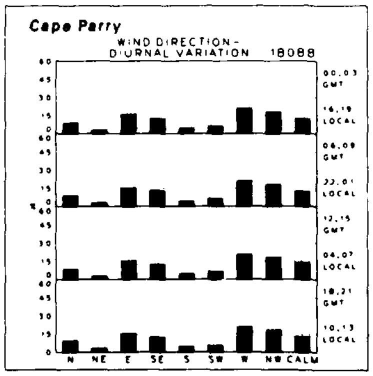
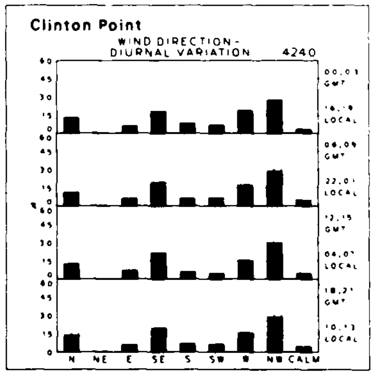
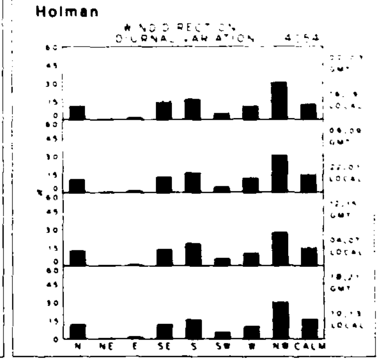
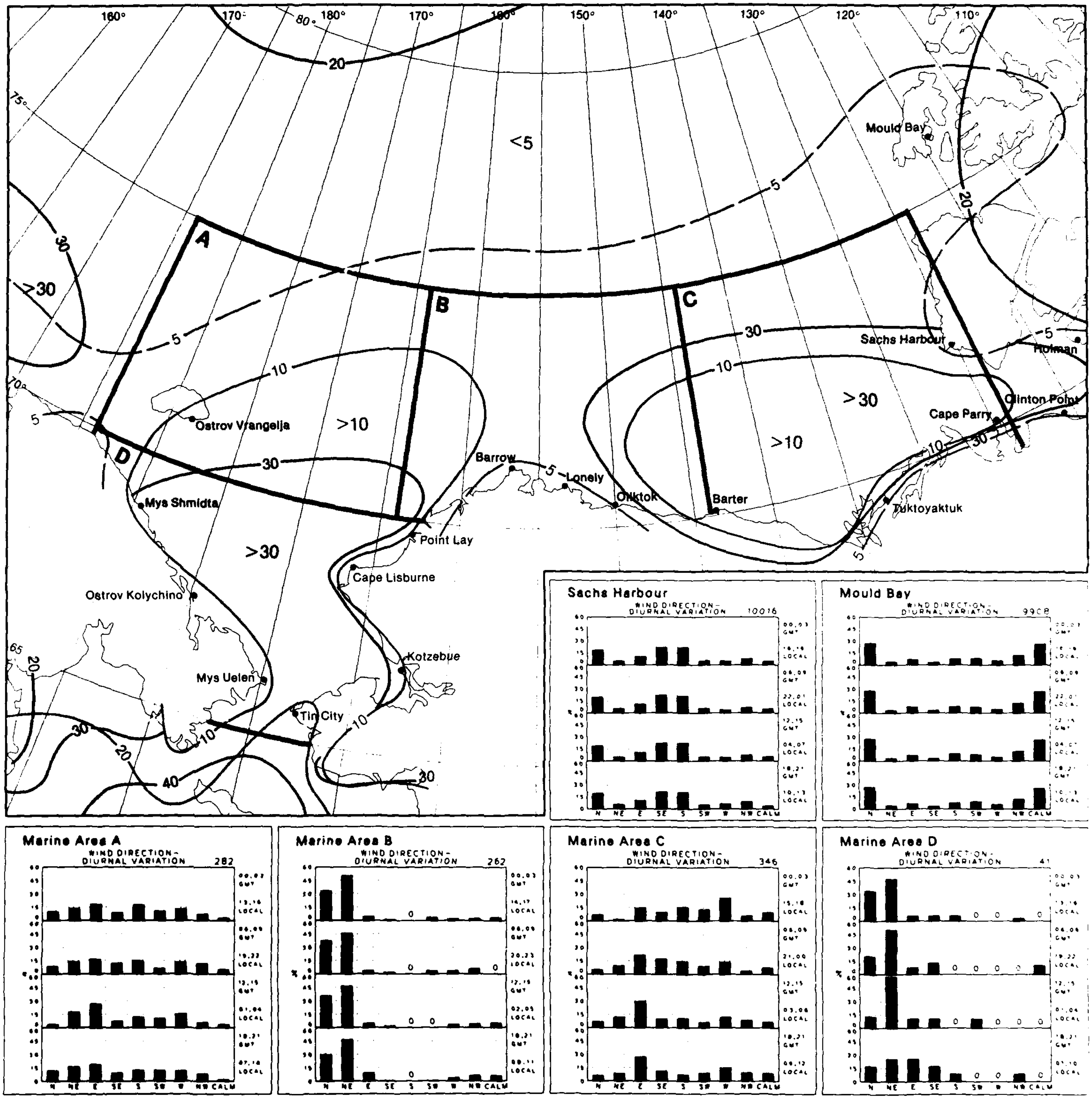


Clinton Point



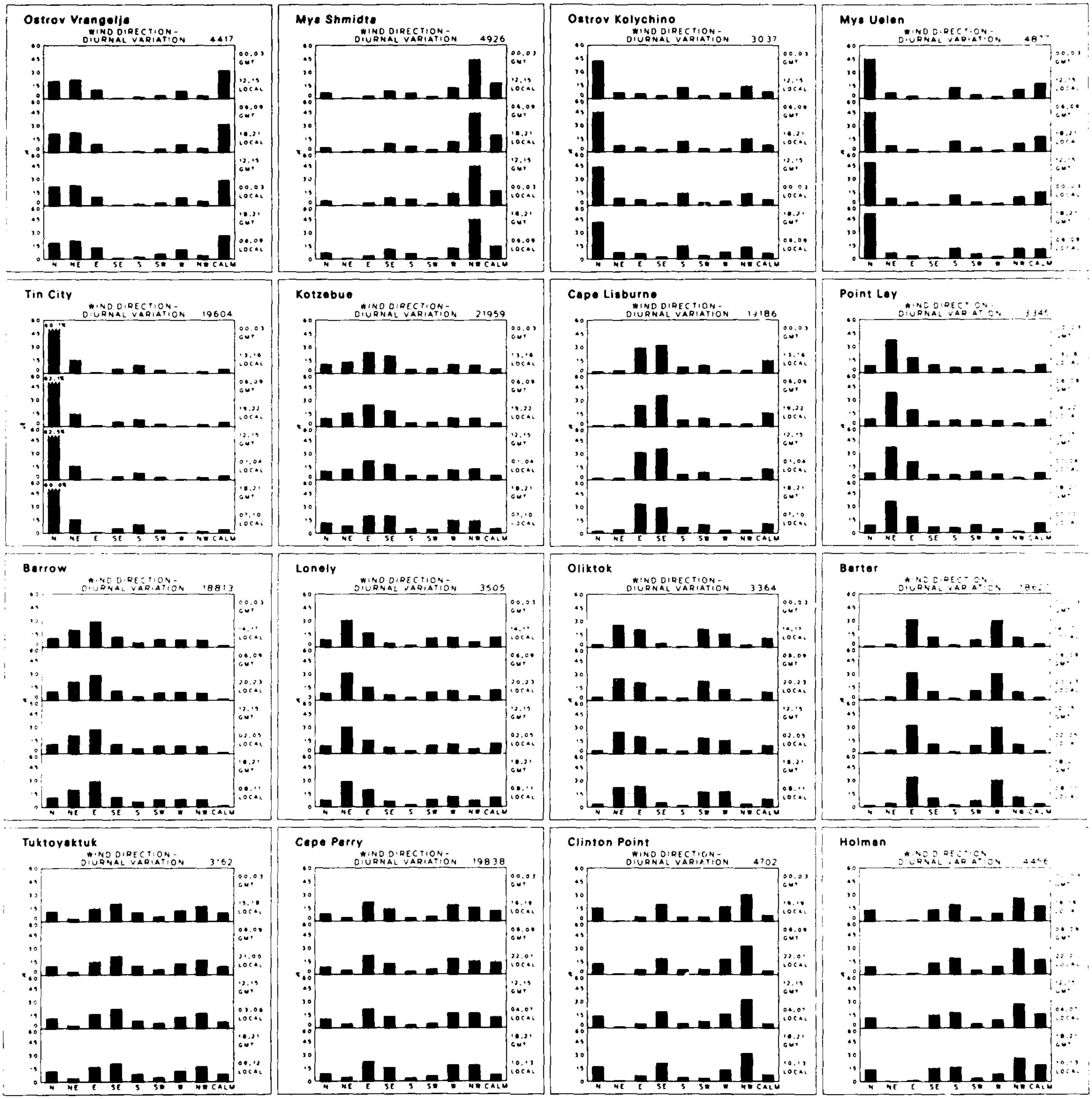
Holman





12 Wind Speed 11-21 and 22-33 Knots

February


Ostrov Vrangelja
WIND DIRECTION - DIURNAL VARIATION 4417
Mys Shmidta
WIND DIRECTION - DIURNAL VARIATION 4926
Ostrov Kolychino
WIND DIRECTION - DIURNAL VARIATION 3037
Mys Uelen
WIND DIRECTION - DIURNAL VARIATION
Tin City
WIND DIRECTION - DIURNAL VARIATION 19604
Kotzebue
WIND DIRECTION - DIURNAL VARIATION 21959
Cape Lisburne
WIND DIRECTION - DIURNAL VARIATION
Point Lay
WIND DIRECTION - DIURNAL VARIATION
Barrow
WIND DIRECTION - DIURNAL VARIATION 18813
Lonely
WIND DIRECTION - DIURNAL VARIATION 3505
Oliktok
WIND DIRECTION - DIURNAL VARIATION 3364
Barter
WIND DIRECTION - DIURNAL VARIATION
Tuktoyaktuk
WIND DIRECTION - DIURNAL VARIATION
Cape Parry
WIND DIRECTION - DIURNAL VARIATION 19838
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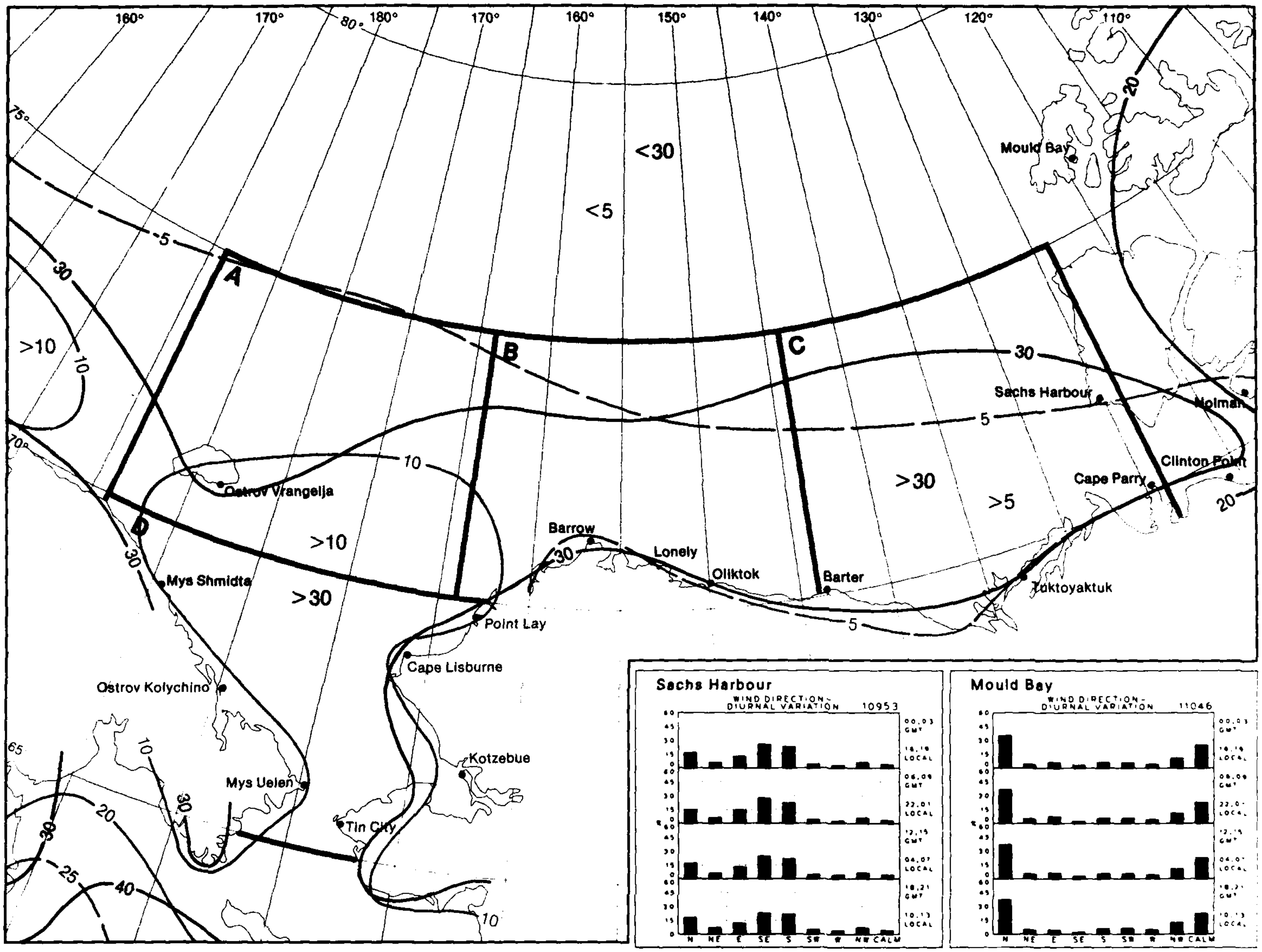
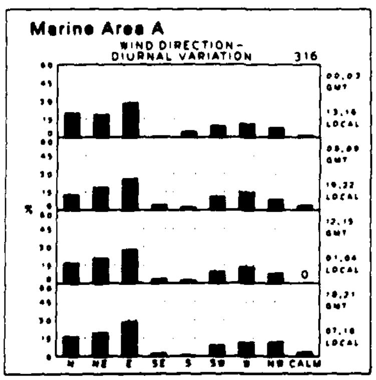
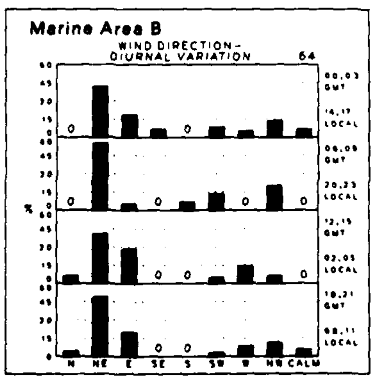
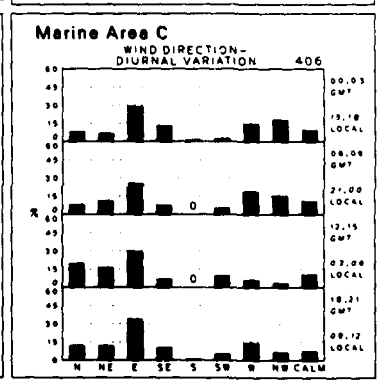
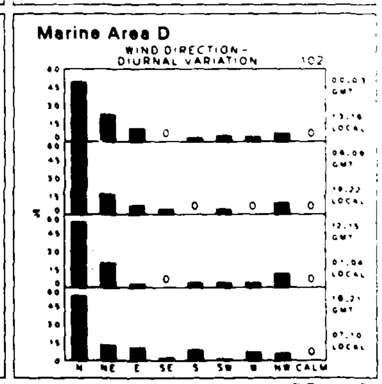
Holman
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM







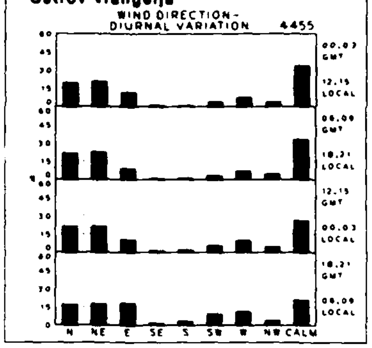




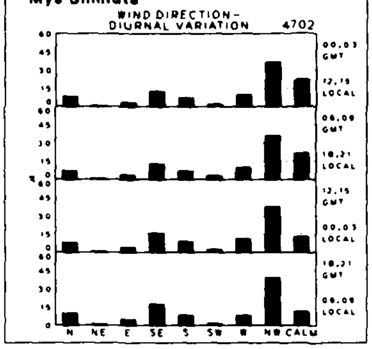
12 Wind Speed 11-21 and 22-33 Knots

March

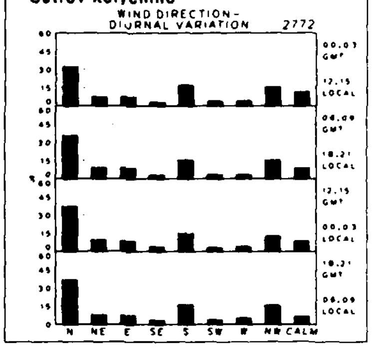
Ostrov Vrangelja



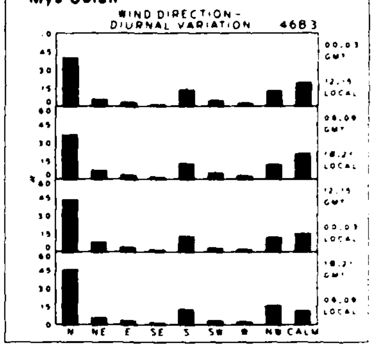
Mys Shmidta



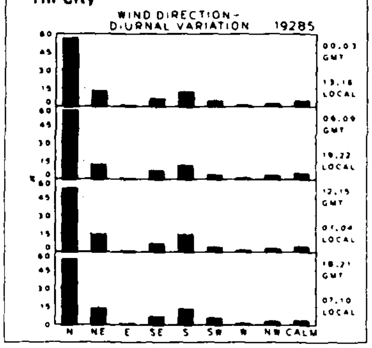
Ostrov Kolychino



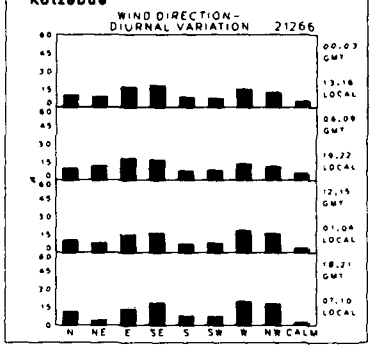
Mys Uelen



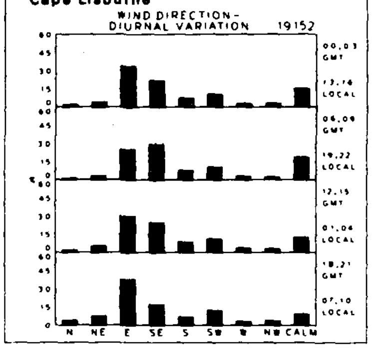
Tin City



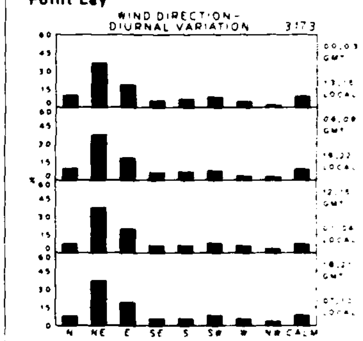
Kotzebue



Cape Lisburne

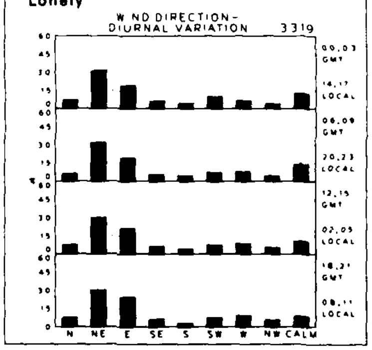


Point Lay



Barrow

Lonely



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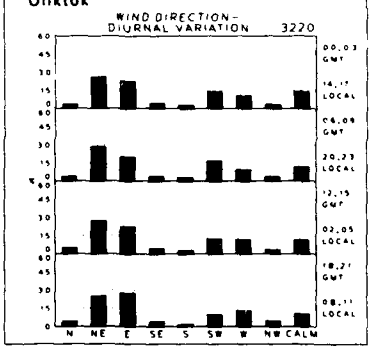
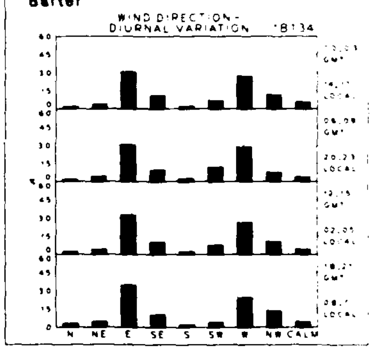
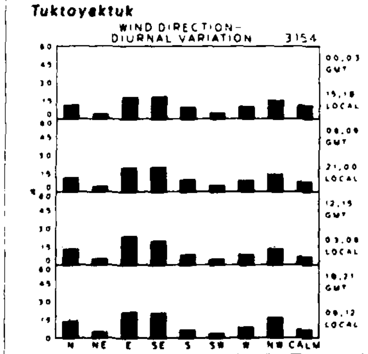


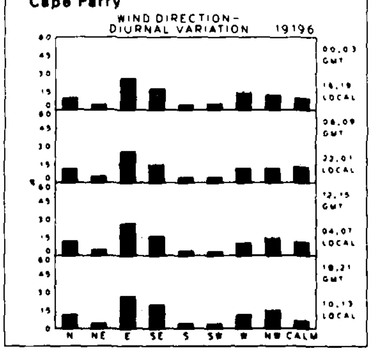
Barter



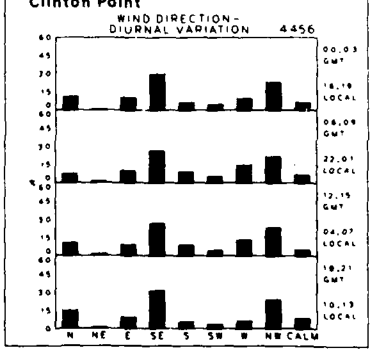
Tuktoyaktuk



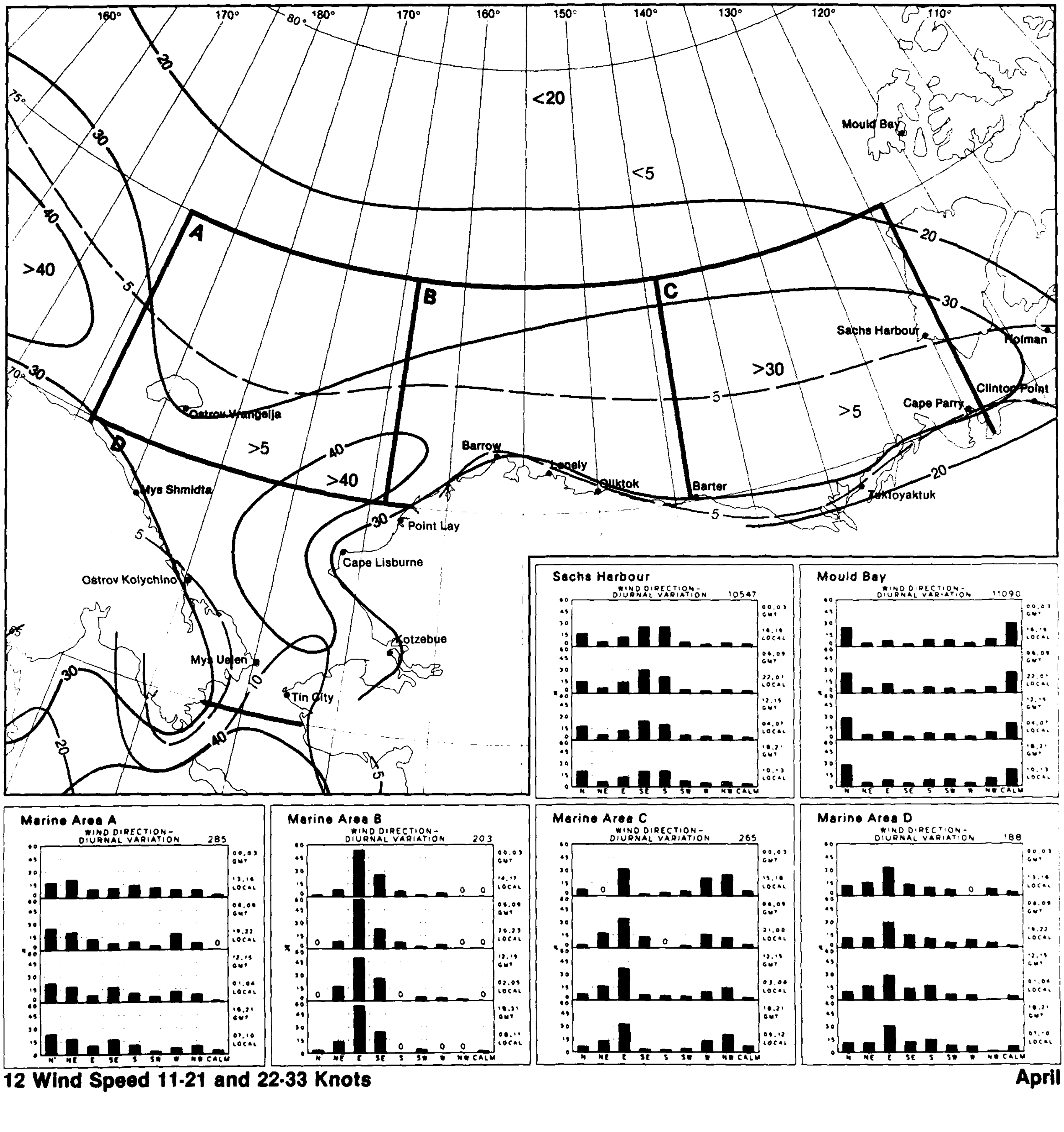
Cape Parry



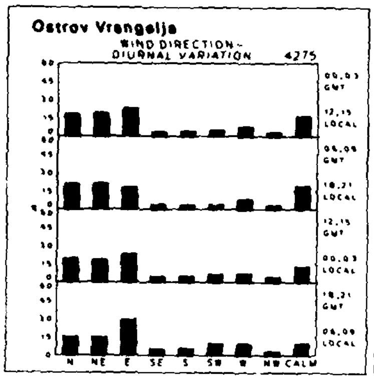
Clinton Point

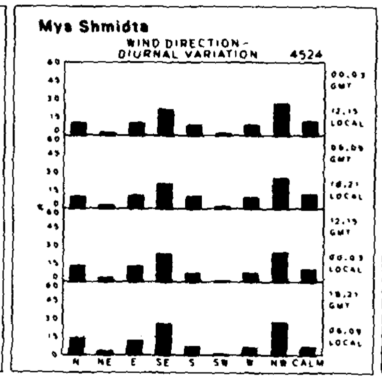


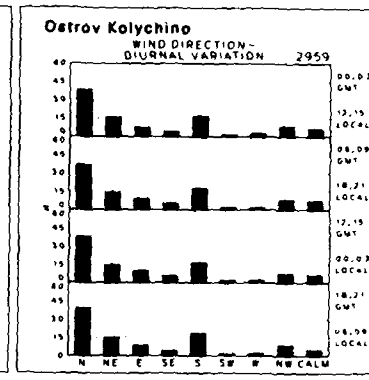
Holman

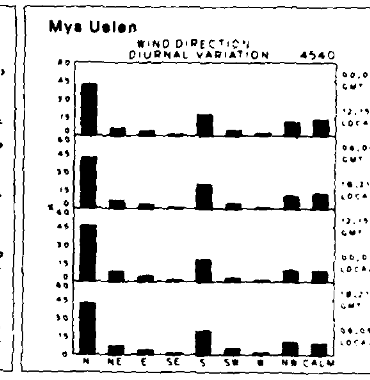


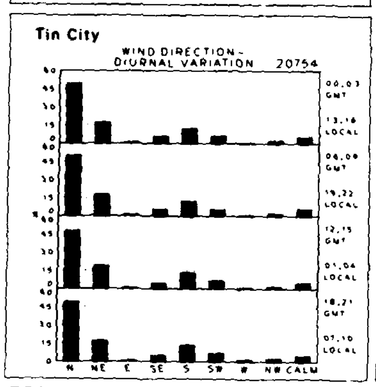
12 Wind Speed 11-21 and 22-33 Knots **April**

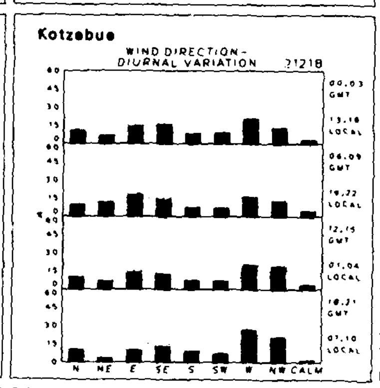


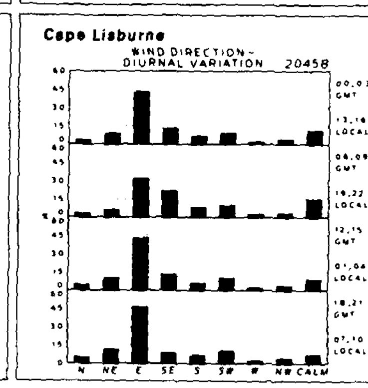


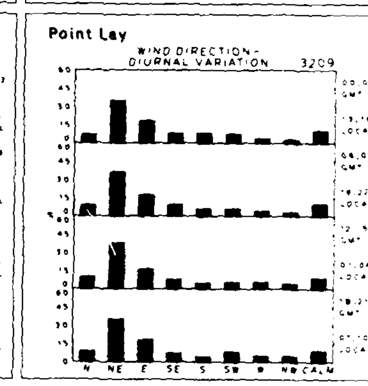


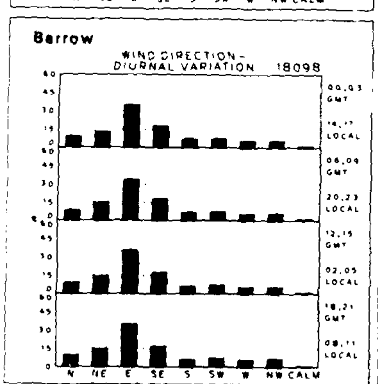


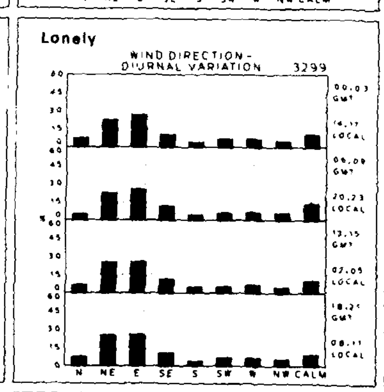


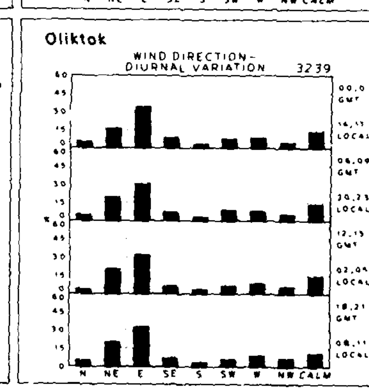


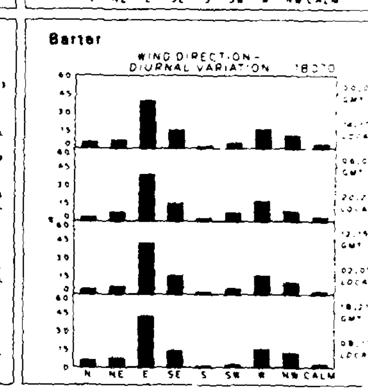


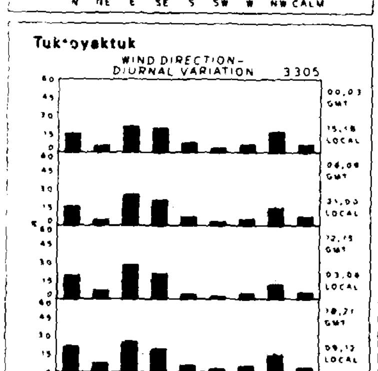


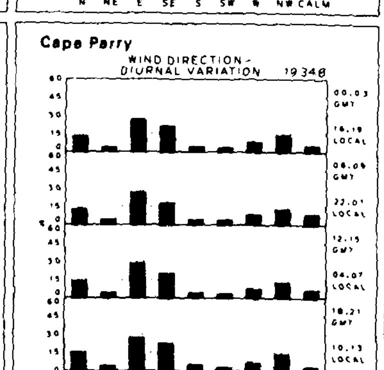


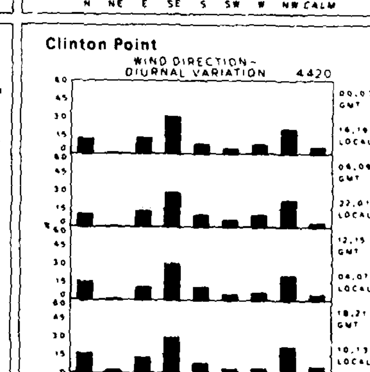


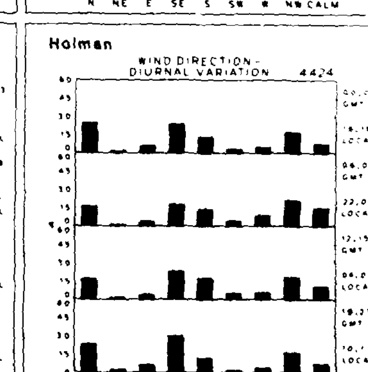






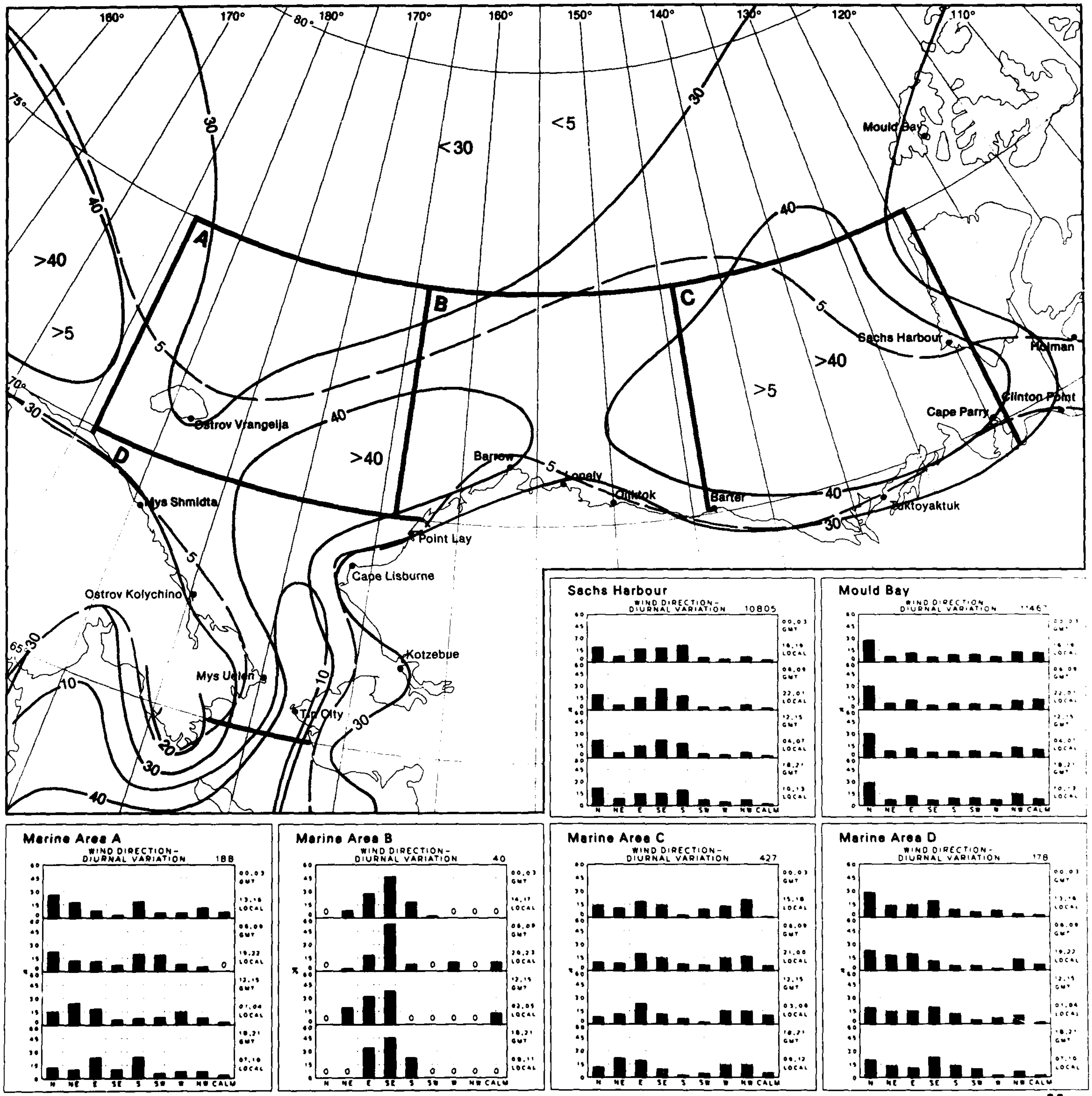






May

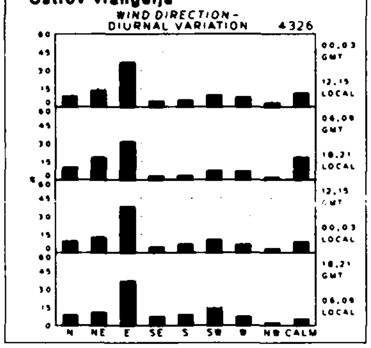
12 Wind Direction and Diurnal Variation



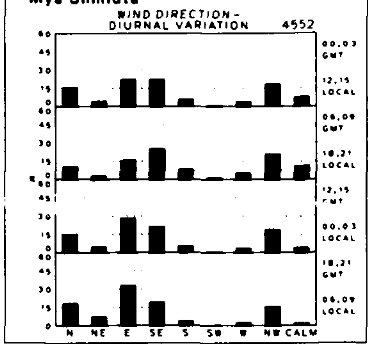
12 Wind Speed 11-21 and 22-33 Knots

May

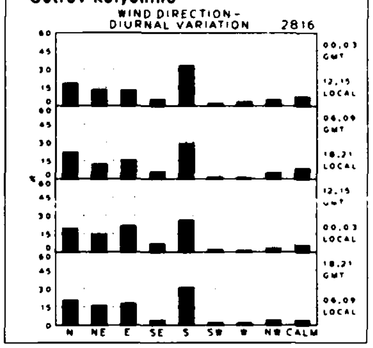
Ostrov Vrangelja



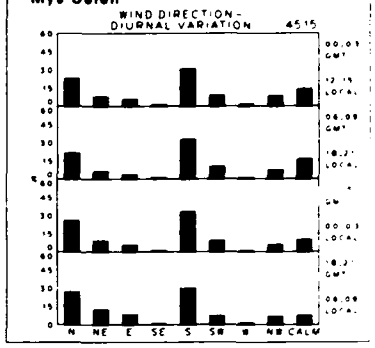
Mys Shmidta



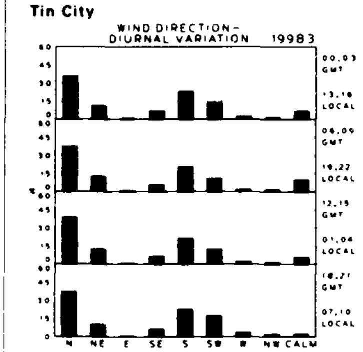
Ostrov Kolychino



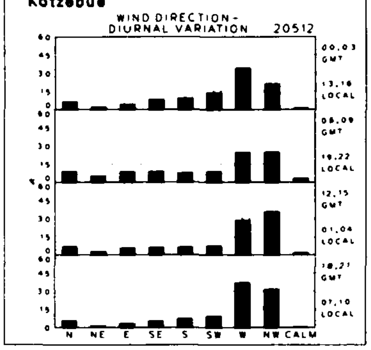
Mys Uelen



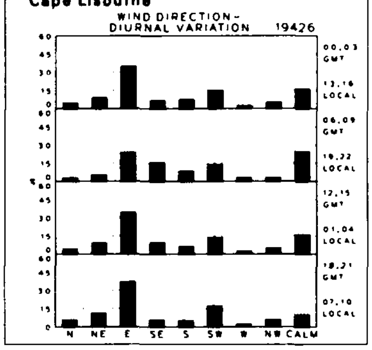
Tin City



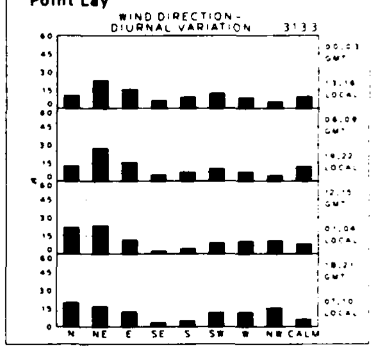
Kotzebue



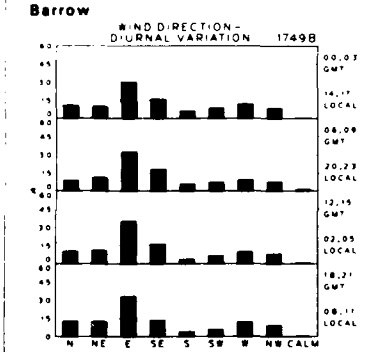
Cape Lisburne



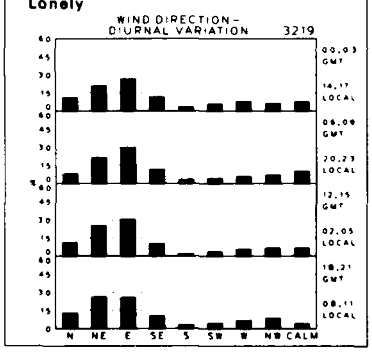
Point Lay



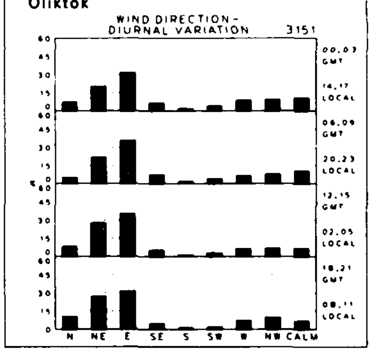
Barrow



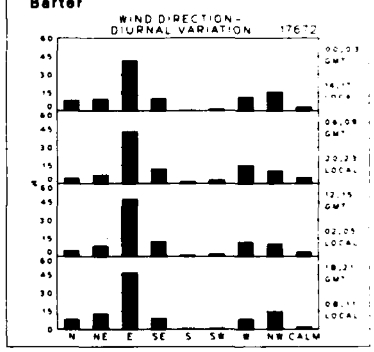
Lonely



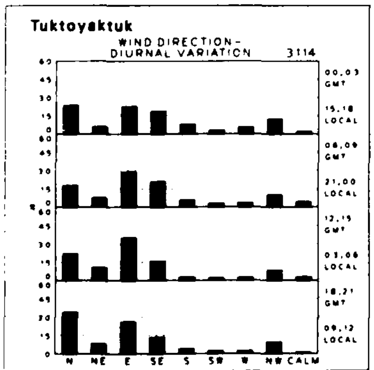
Oliktok



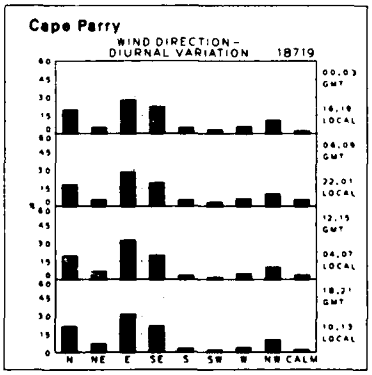
Barter



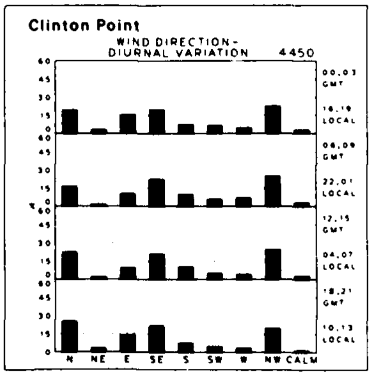
Tuktoyaktuk



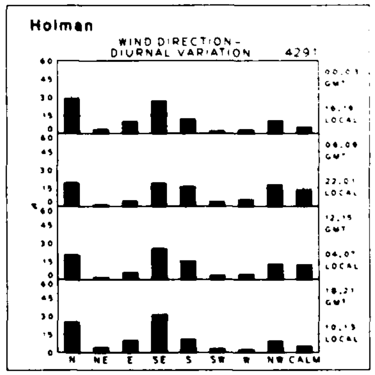
Cape Parry

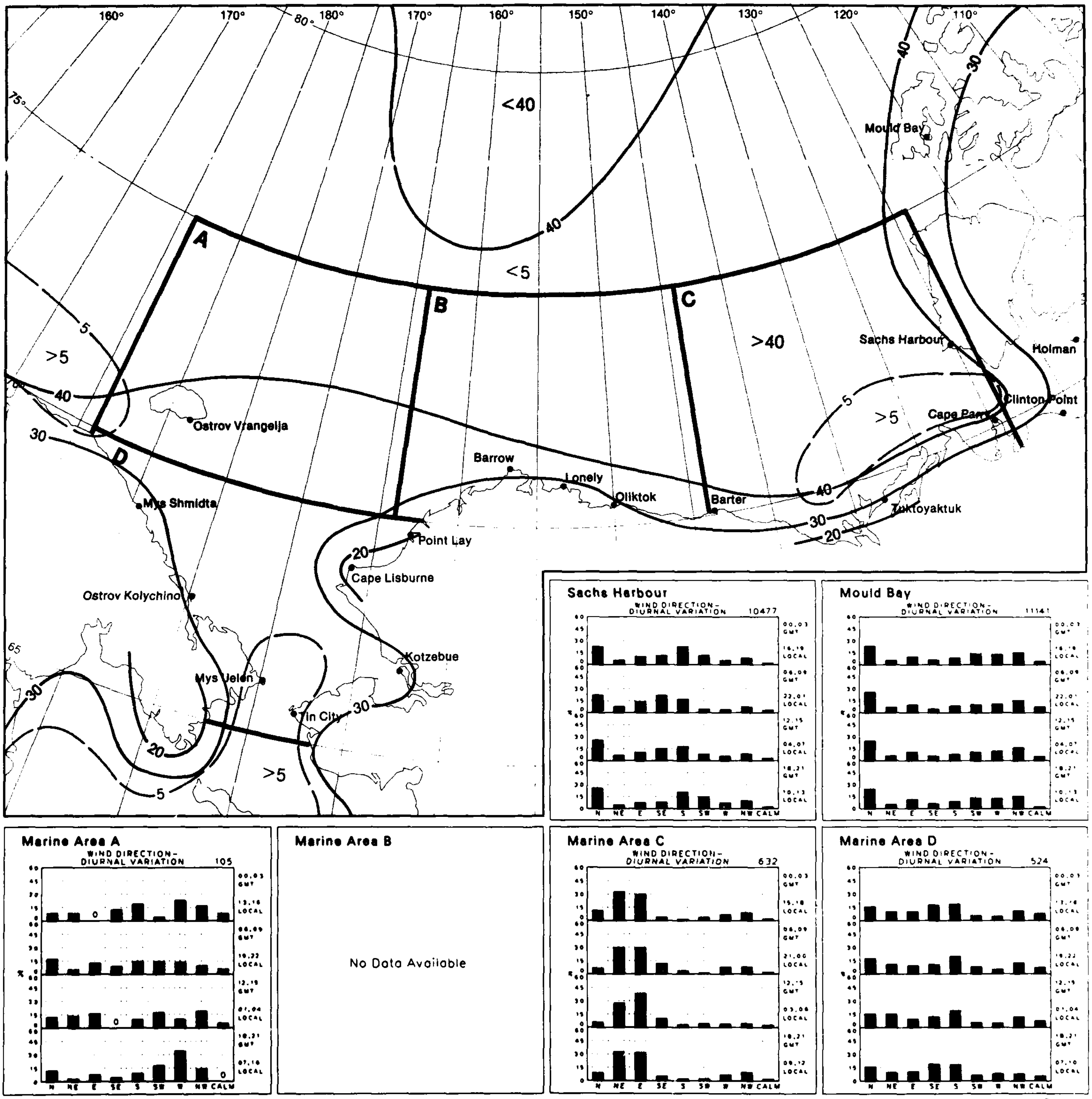


Clinton Point



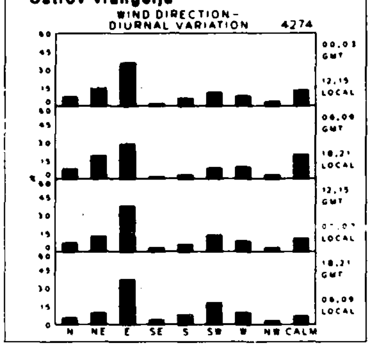
Holman



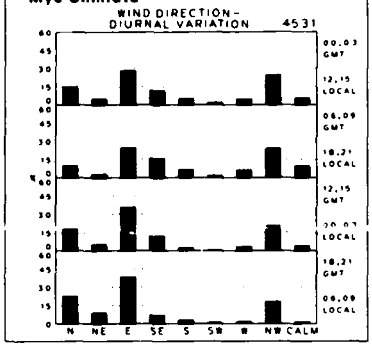


12 Wind Speed 11-21 and 22-33 Knots

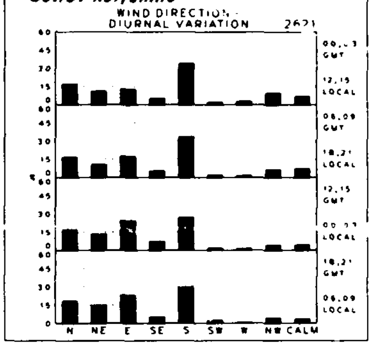
Ostrov Vrangelja



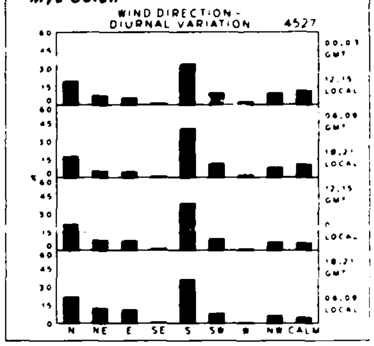
Mys Shmidta



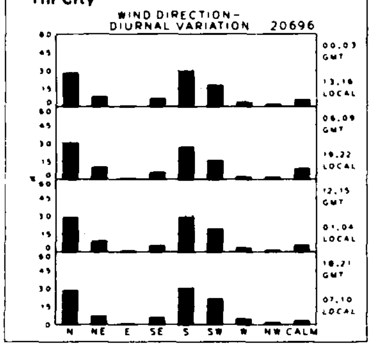
Ostrov Kolychino



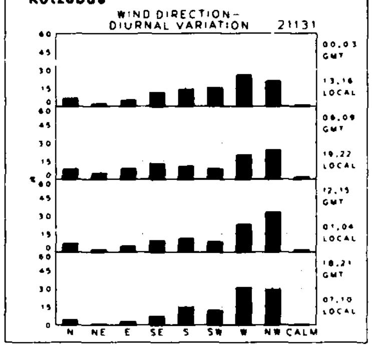
Mys Uelen



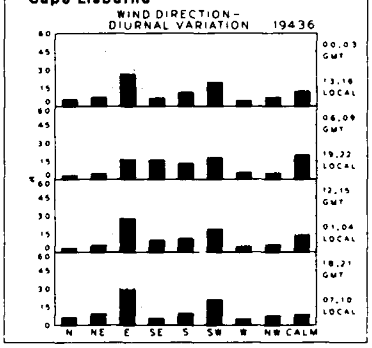
Tin City



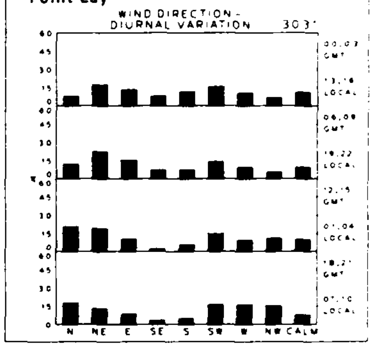
Kotzebue



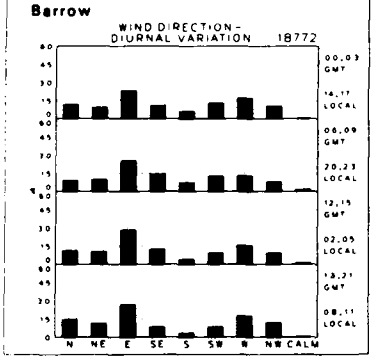
Cape Lisburne



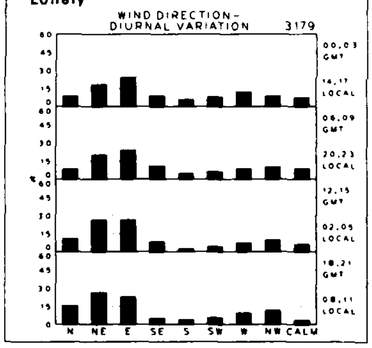
Point Lay



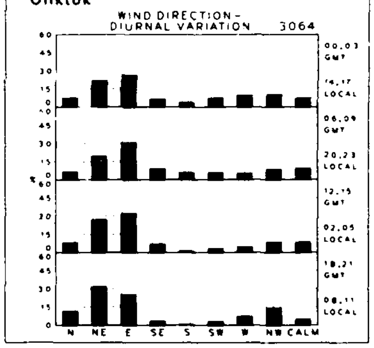
Barrow



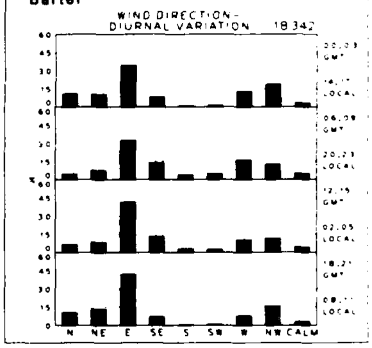
Lonely



Oliktok

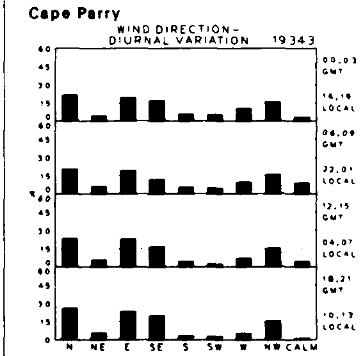


Barter

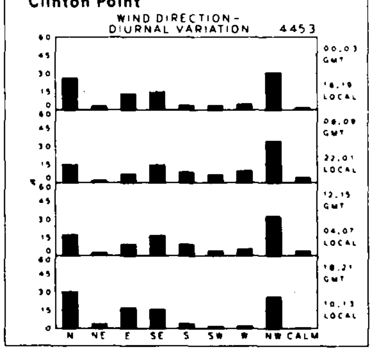


Tuktoyaktuk

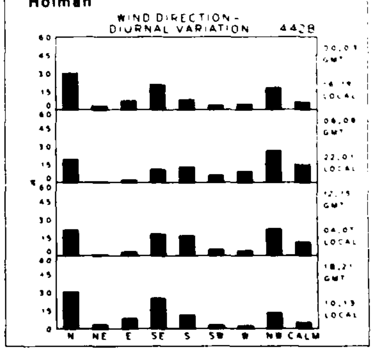
Cape Parry

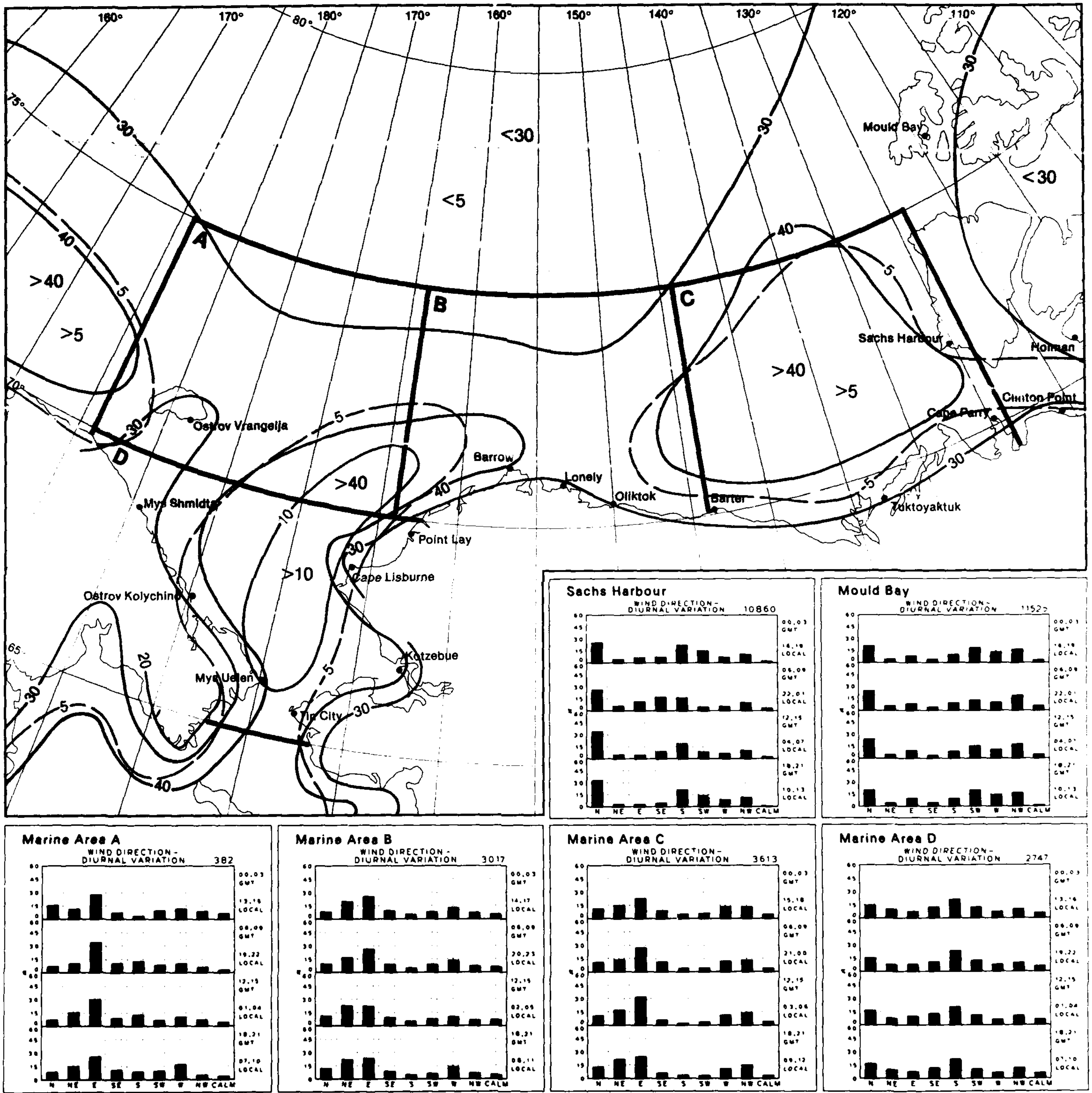


Clinton Point



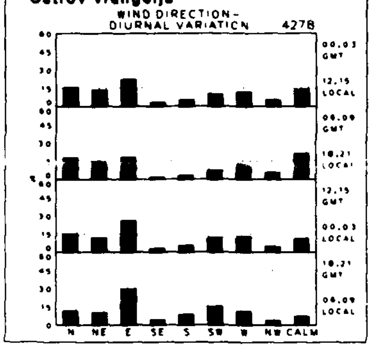
Holman



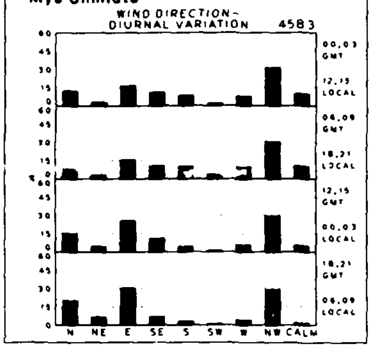


12 Wind Speed 11-21 and 22-33 Knots

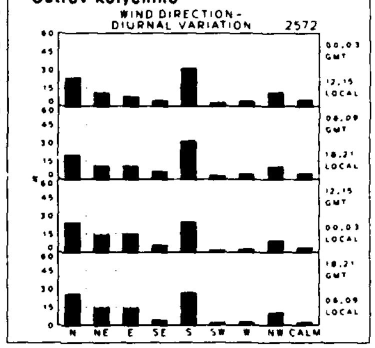
Ostrov Vrangelja



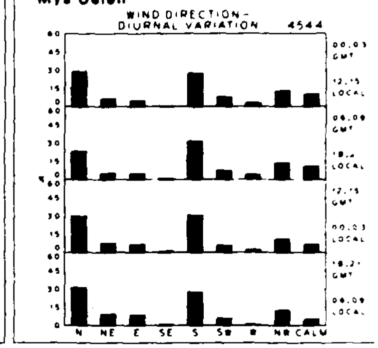
Mys Shmidta



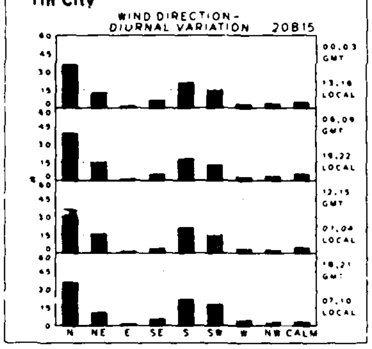
Ostrov Kolychino



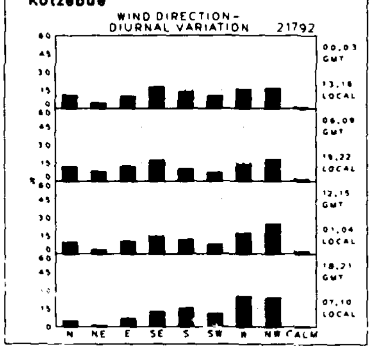
Mys Uelen



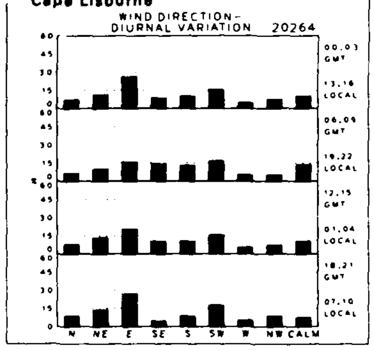
Tin City



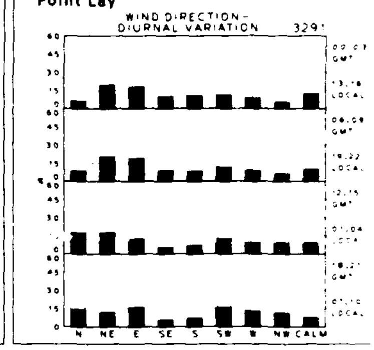
Kotzebue



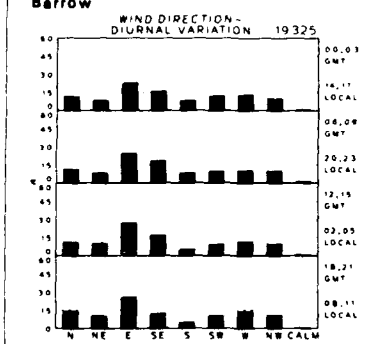
Cape Lisburne



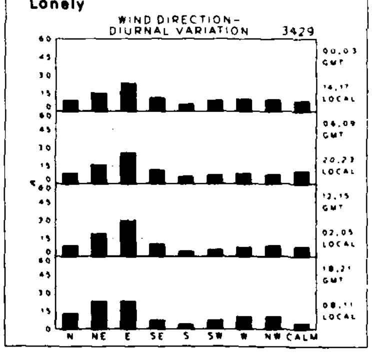
Point Lay



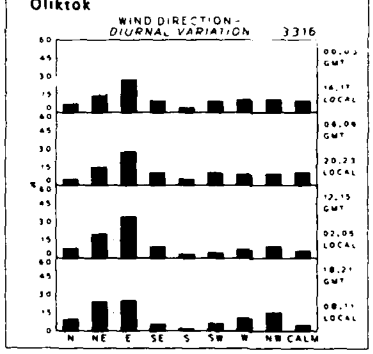
Barrow



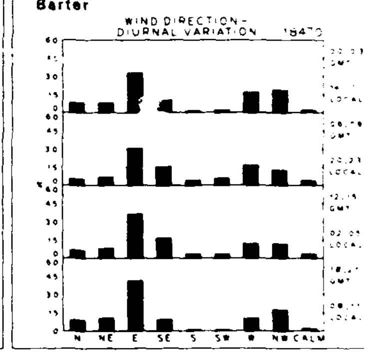
Lonely



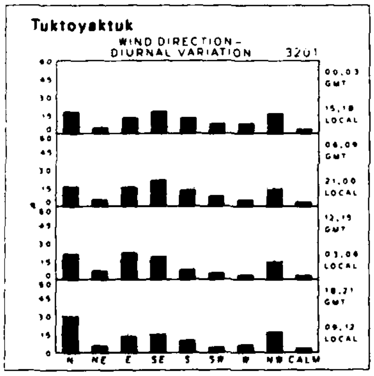
Oliktok



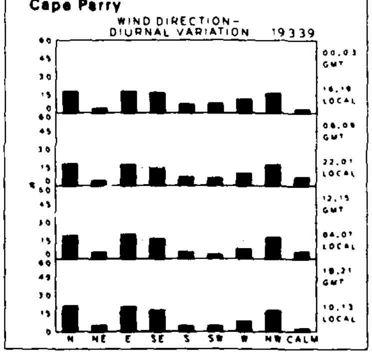
Barter



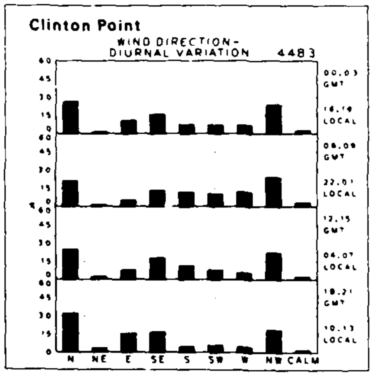
Tuktoyaktuk



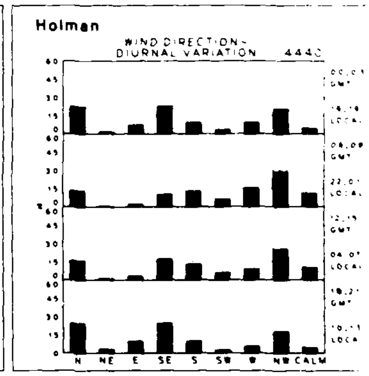
Cape Parry

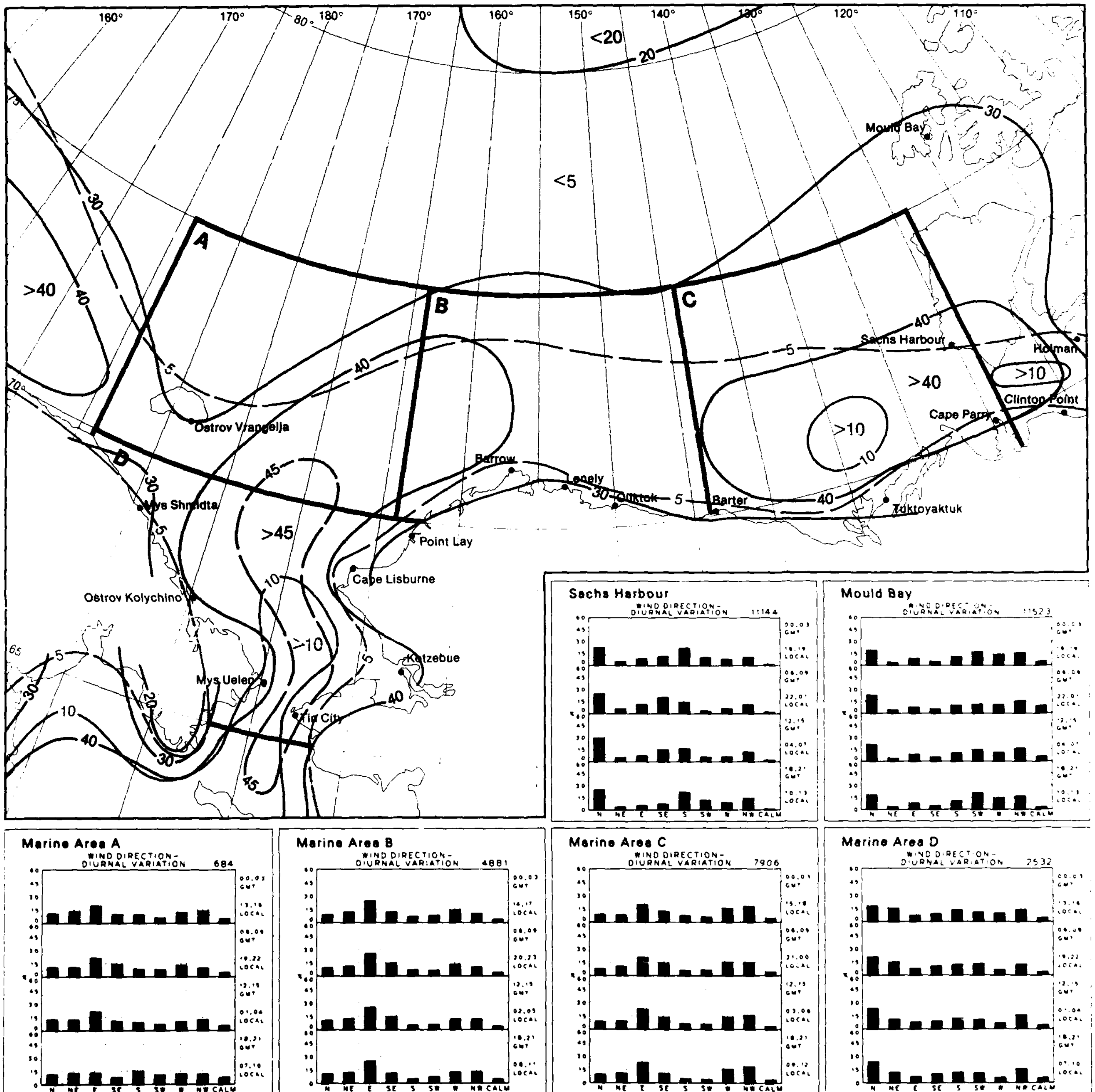


Clinton Point



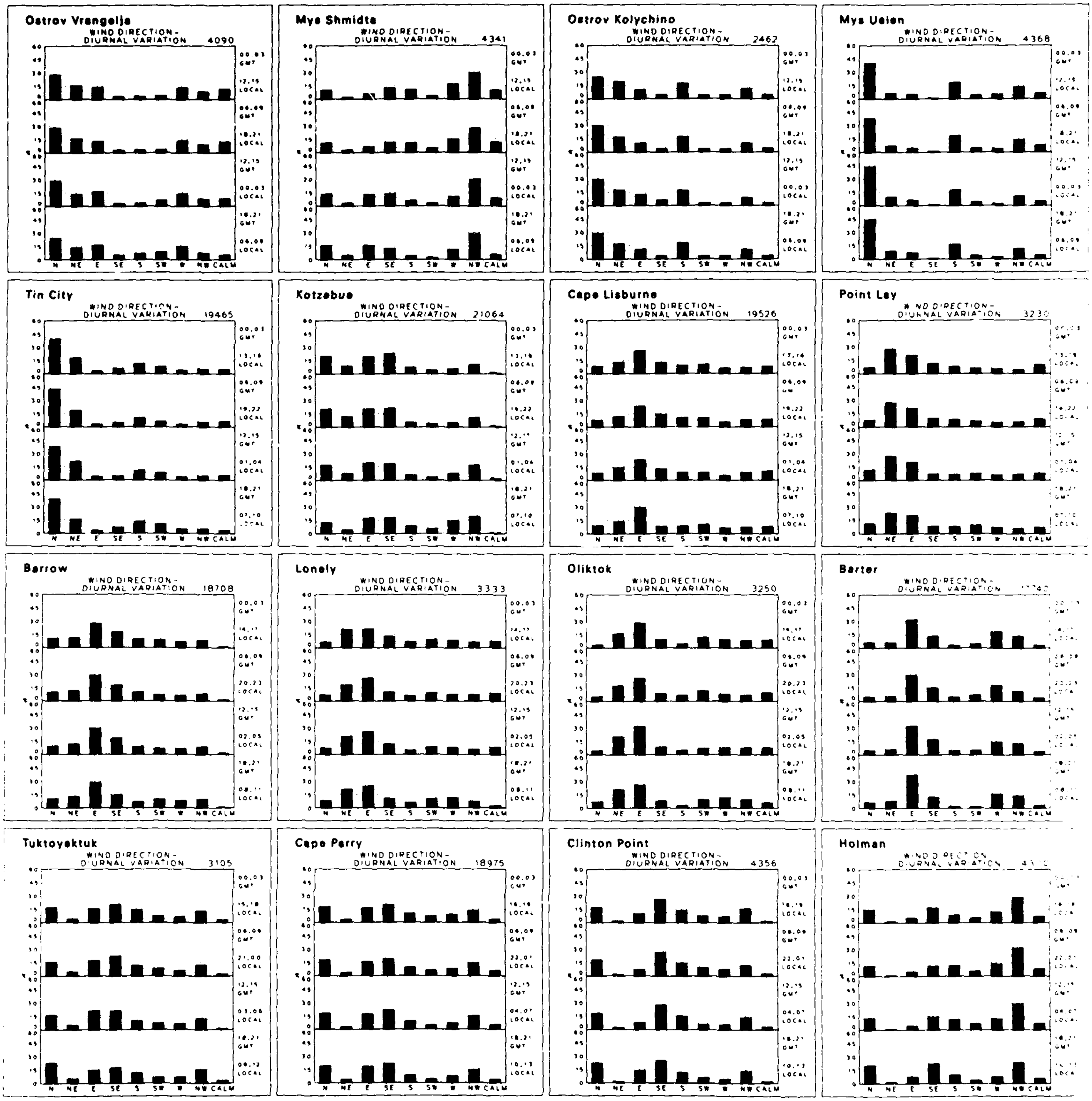
Holman

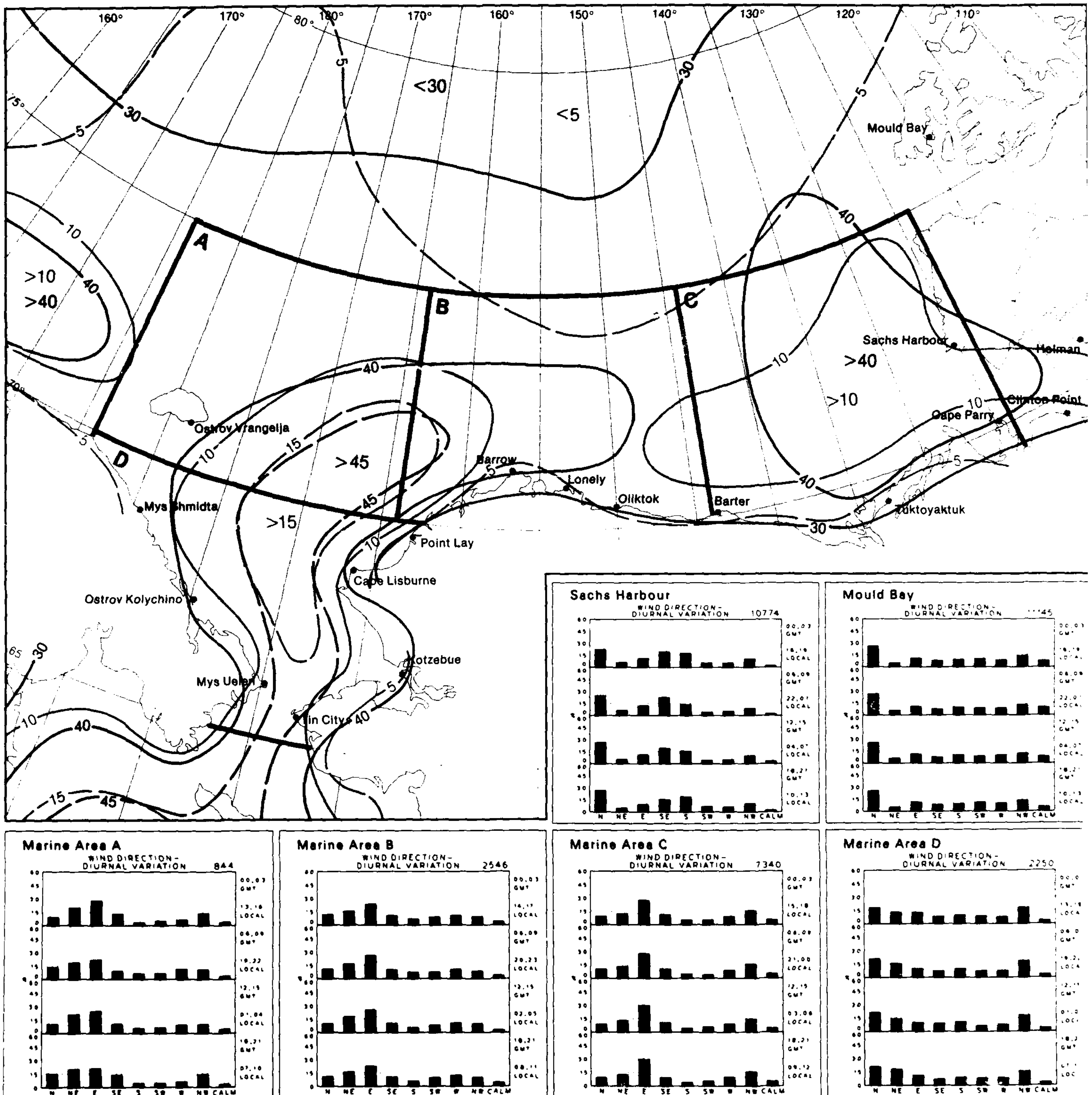




12 Wind Speed 11-21 and 22-33 Knots

August

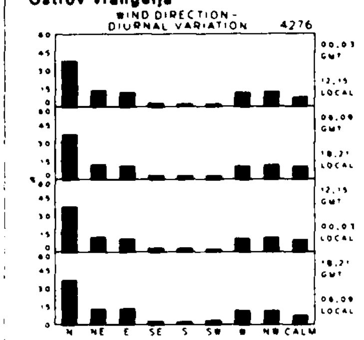

Ostrov Vrangelja
WIND DIRECTION - DIURNAL VARIATION 4090
Mys Shmidta
WIND DIRECTION - DIURNAL VARIATION 4341
Ostrov Kolychino
WIND DIRECTION - DIURNAL VARIATION 2462
Mys Uelen
WIND DIRECTION - DIURNAL VARIATION 4368
Tin City
WIND DIRECTION - DIURNAL VARIATION 19465
Kotzebue
WIND DIRECTION - DIURNAL VARIATION 21064
Cape Lisburne
WIND DIRECTION - DIURNAL VARIATION 19526
Point Lay
WIND DIRECTION - DIURNAL VARIATION
Barrow
WIND DIRECTION - DIURNAL VARIATION 18708
Lonely
WIND DIRECTION - DIURNAL VARIATION 3333
Oliktok
WIND DIRECTION - DIURNAL VARIATION 3250
Barter
WIND DIRECTION - DIURNAL VARIATION
Tuktoyaktuk
WIND DIRECTION - DIURNAL VARIATION 3105
Cape Parry
WIND DIRECTION - DIURNAL VARIATION 18975
Clinton Point
WIND DIRECTION - DIURNAL VARIATION 4356
Holman
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM



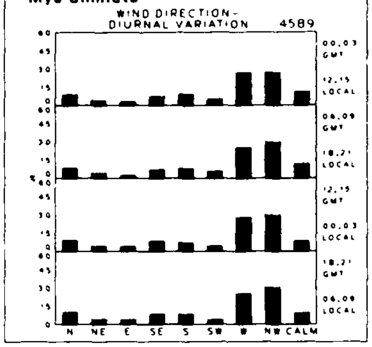
12 Wind Speed 11-21 and 22-33 Knots

Septemb

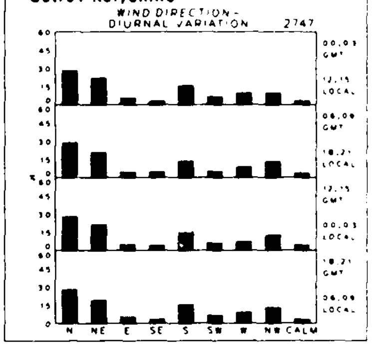
Ostrov Vrangelja



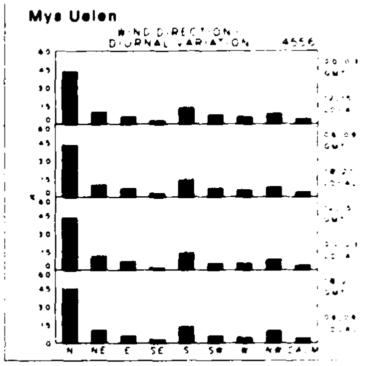
Mys Shmidta



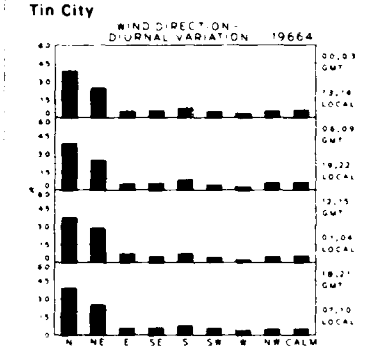
Ostrov Kolychino



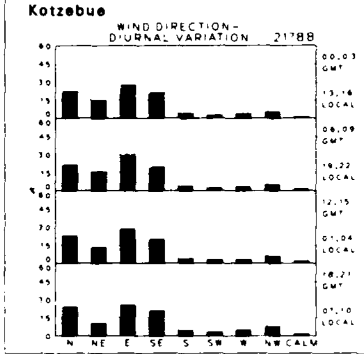
Mys Uelen



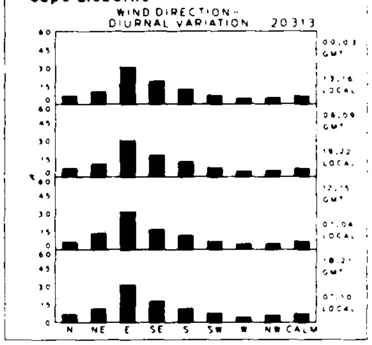
Tin City



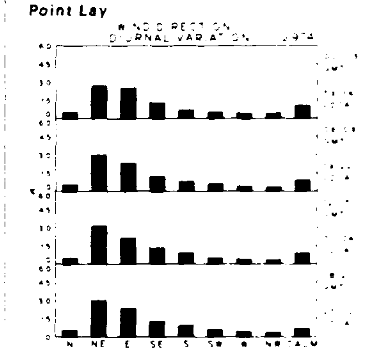
Kotzebue



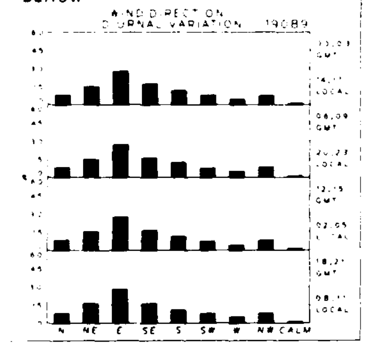
Cape Lisburne



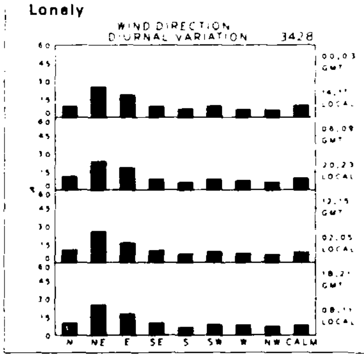
Point Lay



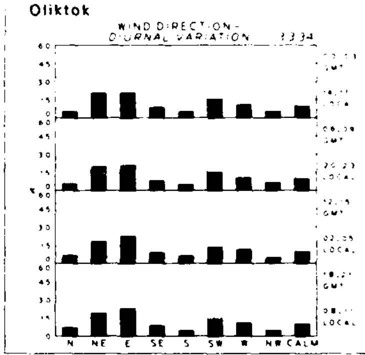
Barrow



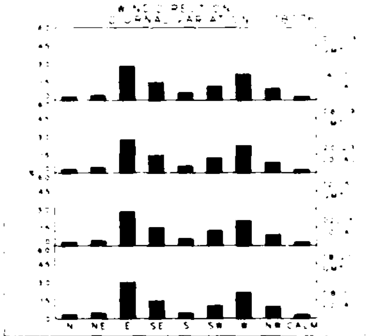
Lonely



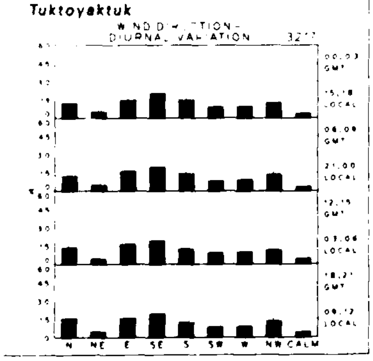
Oliktok



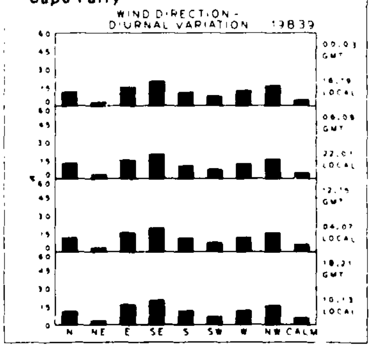
Barter



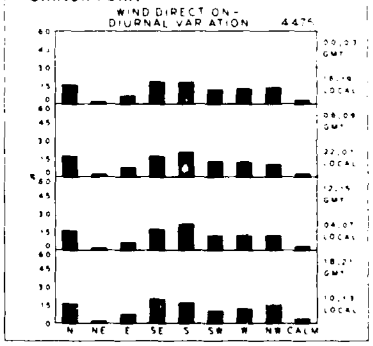
Tuktoyaktuk



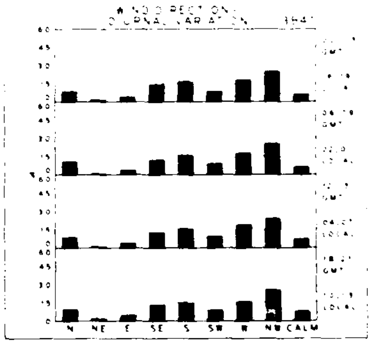
Cape Parry

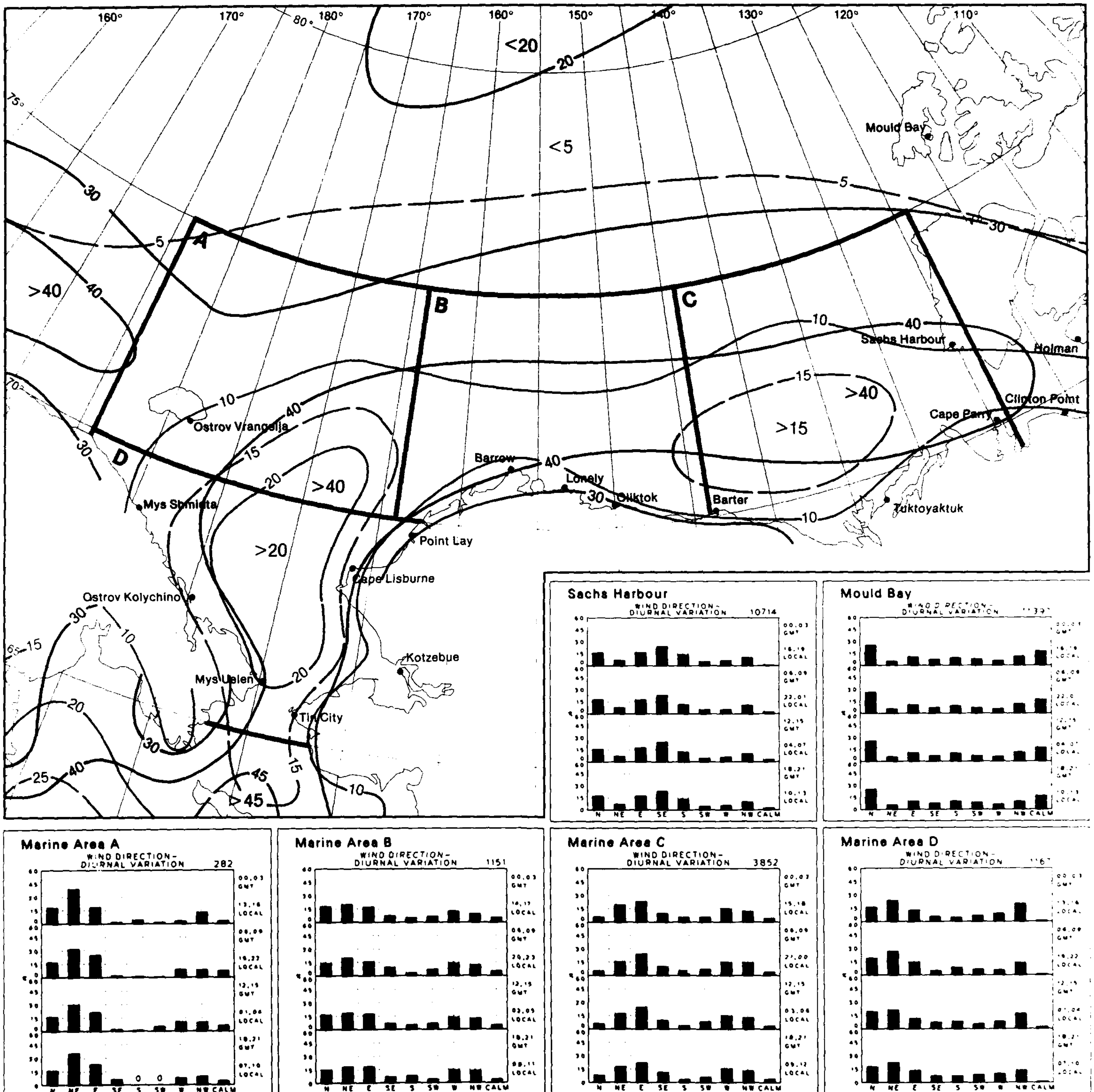


Clinton Point



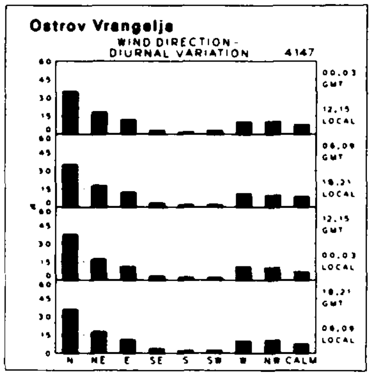
Holman

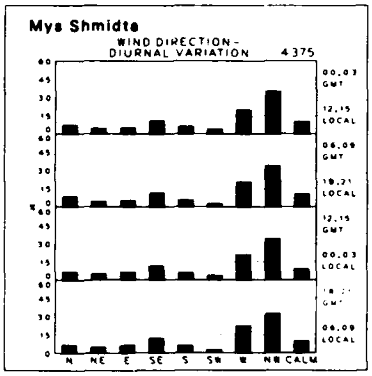


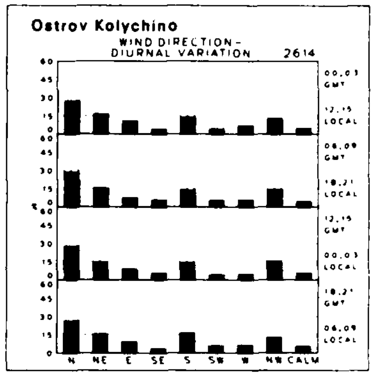


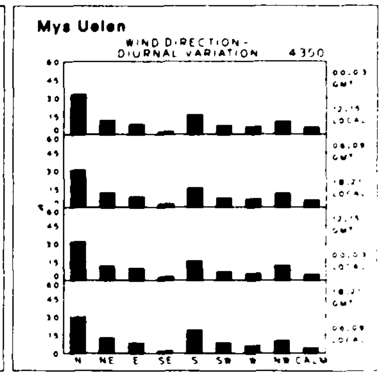
12 Wind Speed 11-21 and 22-33 Knots

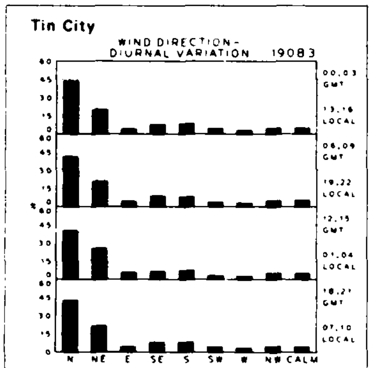
October

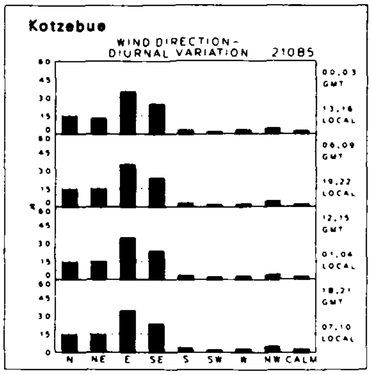

Ostrov Vrangelja
WIND DIRECTION - DIURNAL VARIATION 4147
N NE E SE S SW W NW CALM

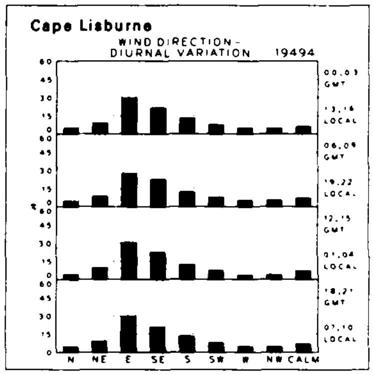

Mys Shmidta
WIND DIRECTION - DIURNAL VARIATION 4375
N NE E SE S SW W NW CALM

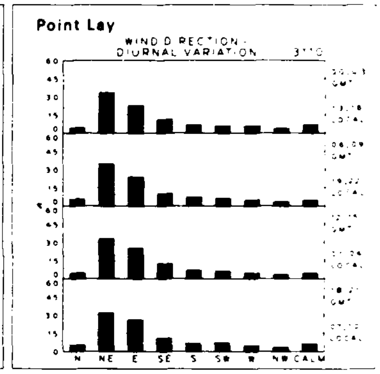

Ostrov Kolychino
WIND DIRECTION - DIURNAL VARIATION 2614
N NE E SE S SW W NW CALM

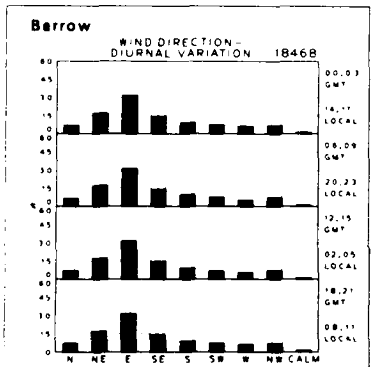

Mys Uelen
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM

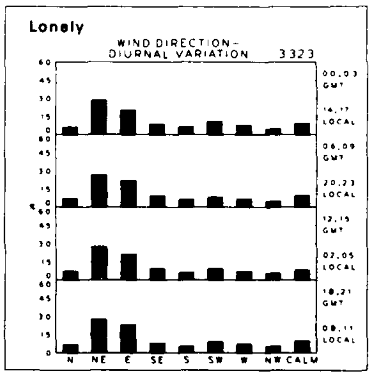

Tin City
WIND DIRECTION - DIURNAL VARIATION 19083
N NE E SE S SW W NW CALM

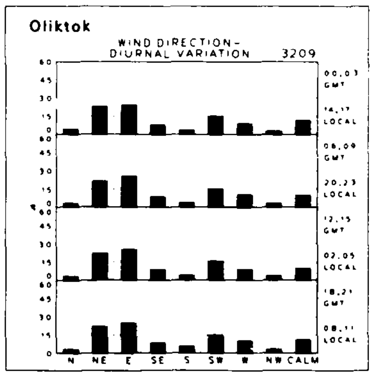

Kotzebue
WIND DIRECTION - DIURNAL VARIATION 21085
N NE E SE S SW W NW CALM

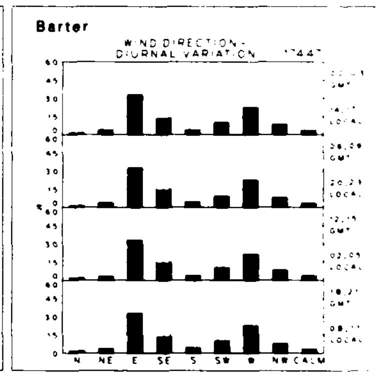

Cape Lisburne
WIND DIRECTION - DIURNAL VARIATION 19494
N NE E SE S SW W NW CALM

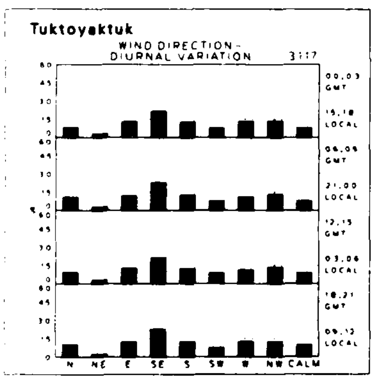

Point Lay
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM

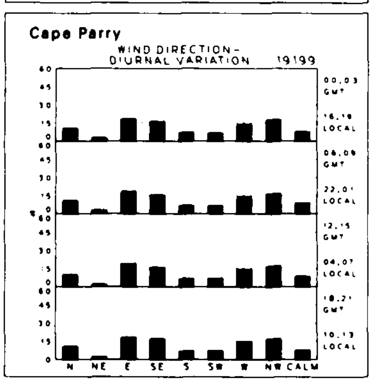

Barrow
WIND DIRECTION - DIURNAL VARIATION 18468
N NE E SE S SW W NW CALM

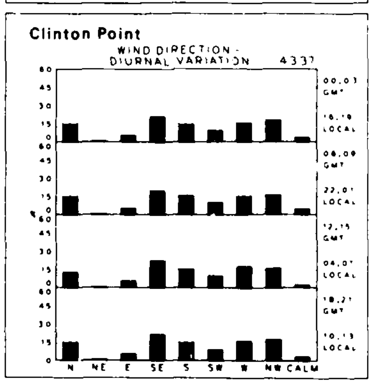

Lonely
WIND DIRECTION - DIURNAL VARIATION 3323
N NE E SE S SW W NW CALM

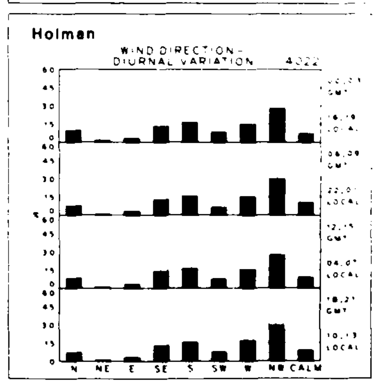

Oliktok
WIND DIRECTION - DIURNAL VARIATION 3209
N NE E SE S SW W NW CALM

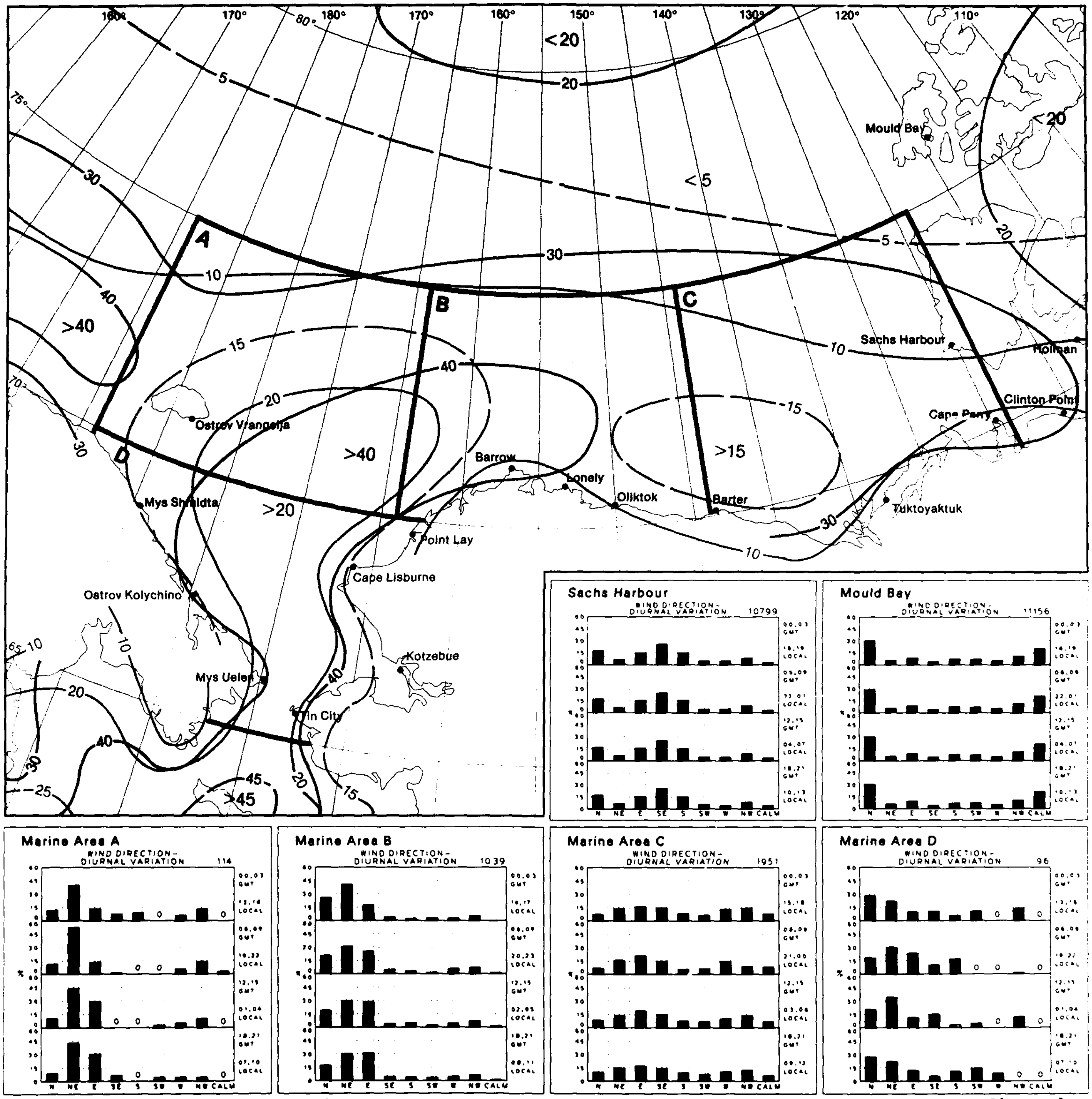

Barter
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM


Tuktoyaktuk
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM


Cape Parry
WIND DIRECTION - DIURNAL VARIATION 19199
N NE E SE S SW W NW CALM


Clinton Point
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM

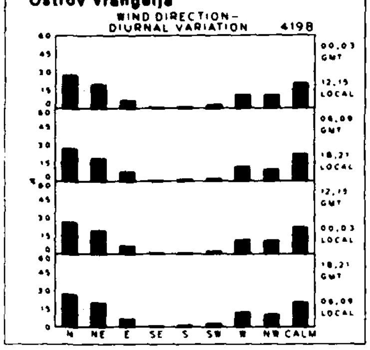

Holman
WIND DIRECTION - DIURNAL VARIATION
N NE E SE S SW W NW CALM



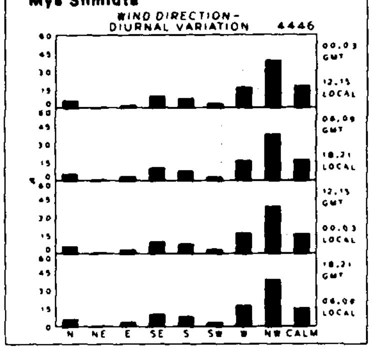
12 Wind Speed 11-21 and 22-33 Knots

November

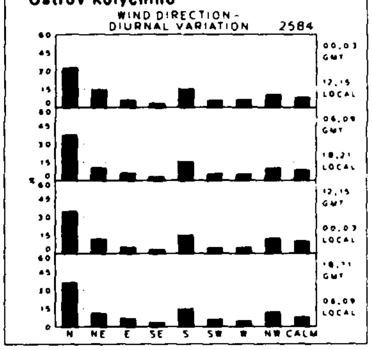
Ostrov Vrangelja



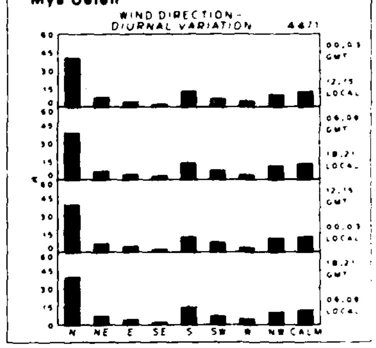
Mys Shmidta



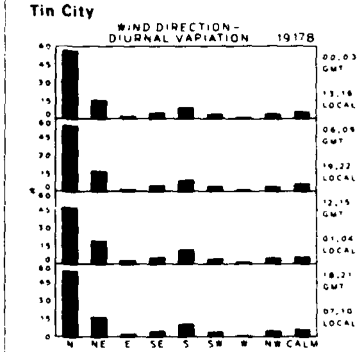
Ostrov Kolychino



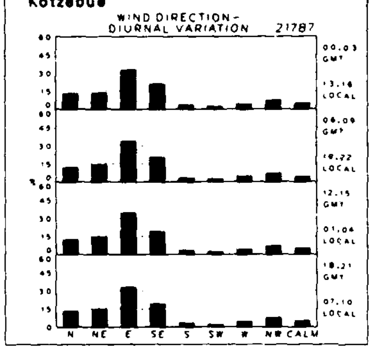
Mys Uelen



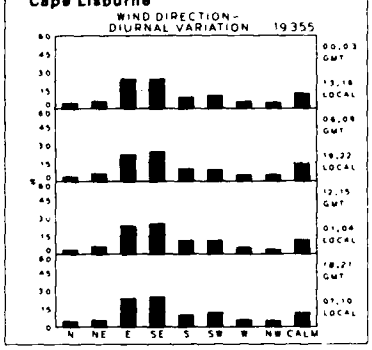
Tin City



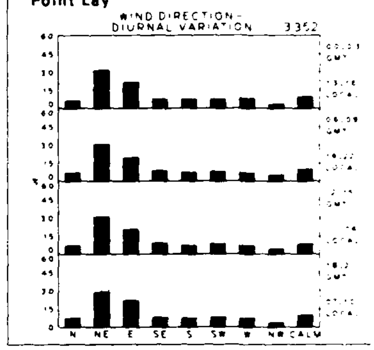
Kotzebue



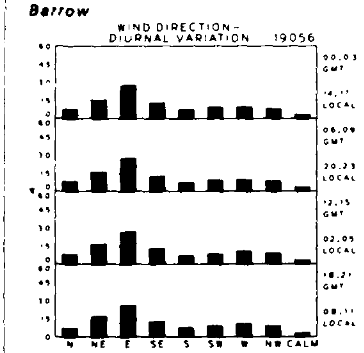
Cape Lisburne



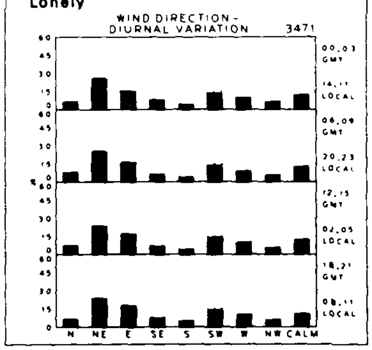
Point Lay



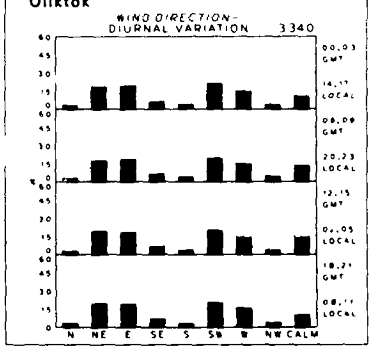
Barrow



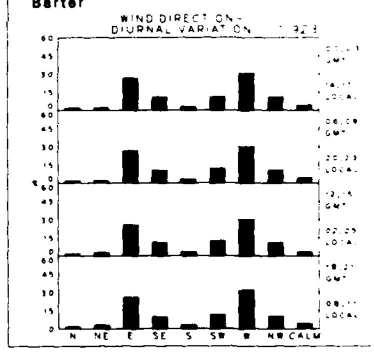
Lonely



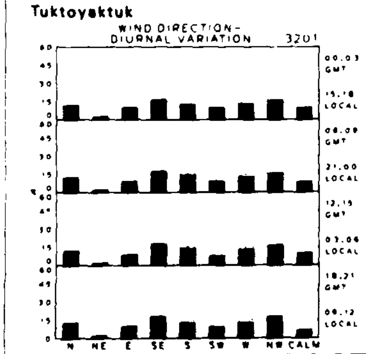
Oliktok



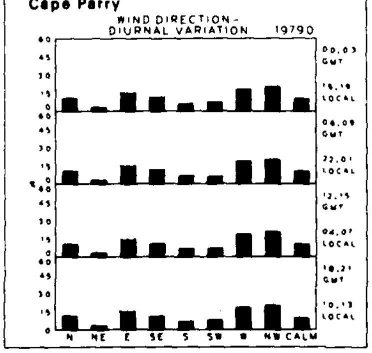
Barter



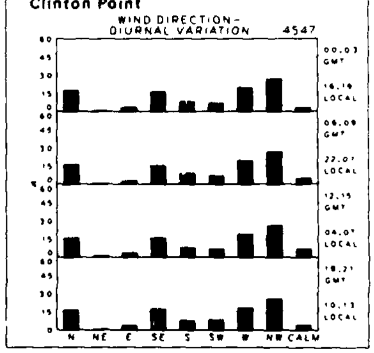
Tuktoyaktuk



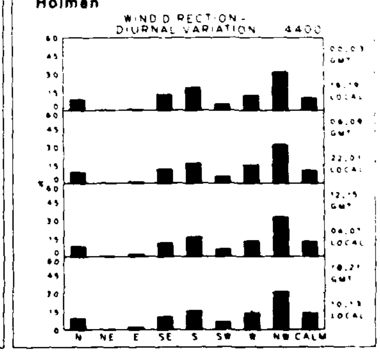
Cape Parry

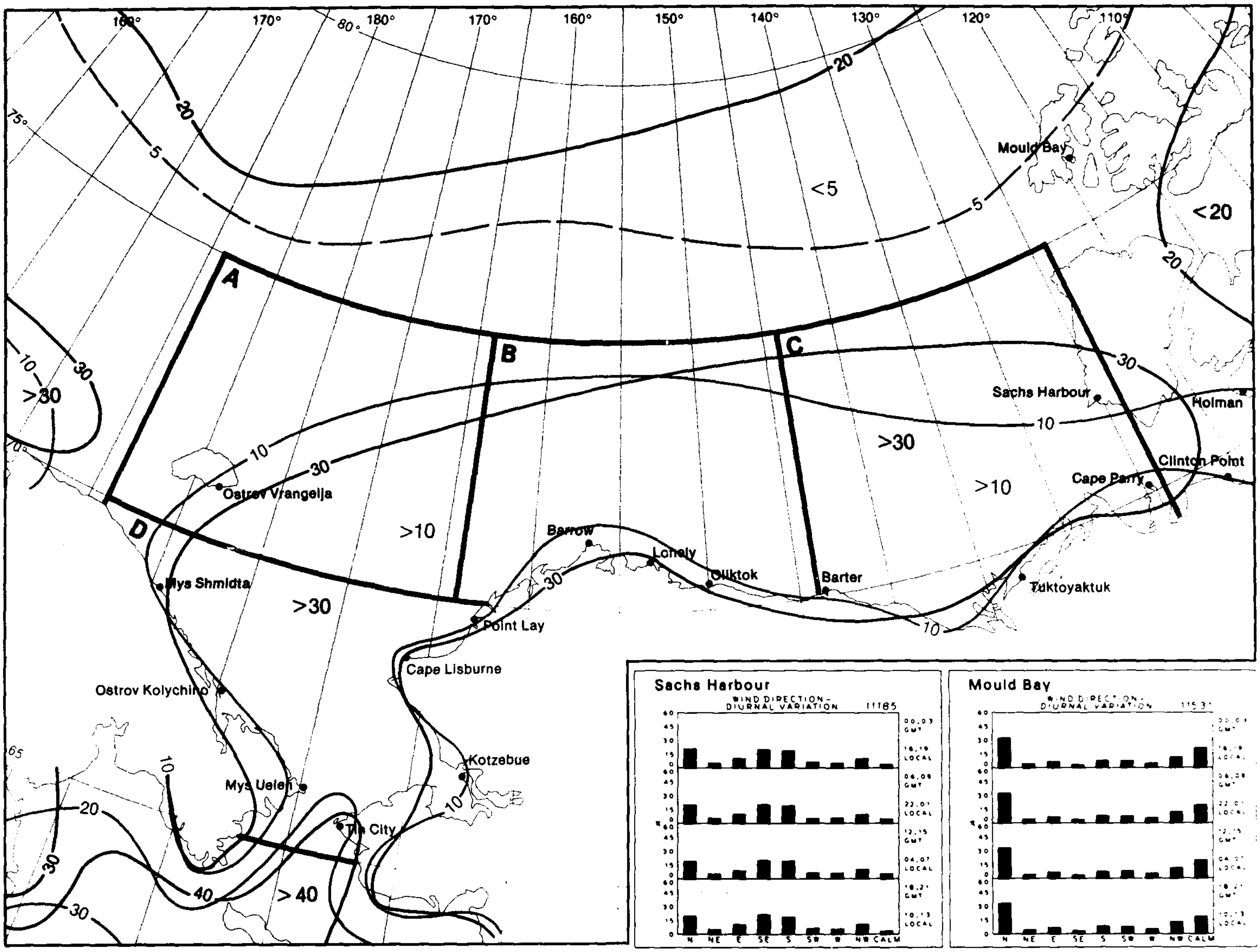


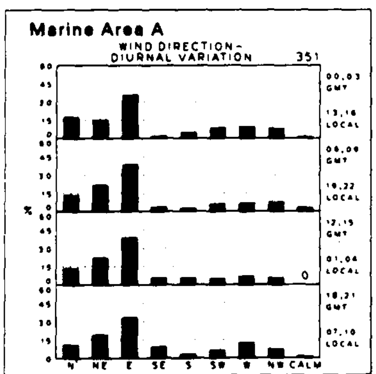
Clinton Point

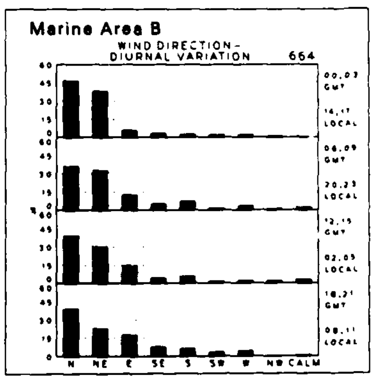


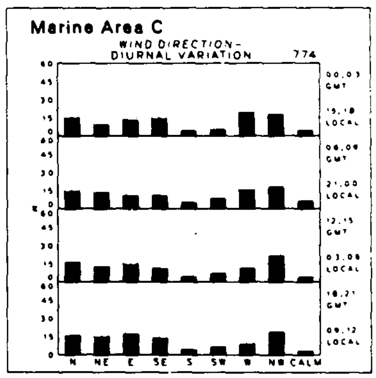
Holman

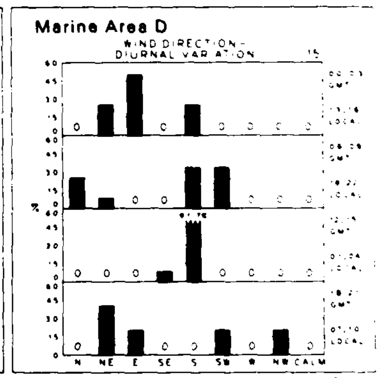












12 Wind Speed 11-21 and 22-33 Knots

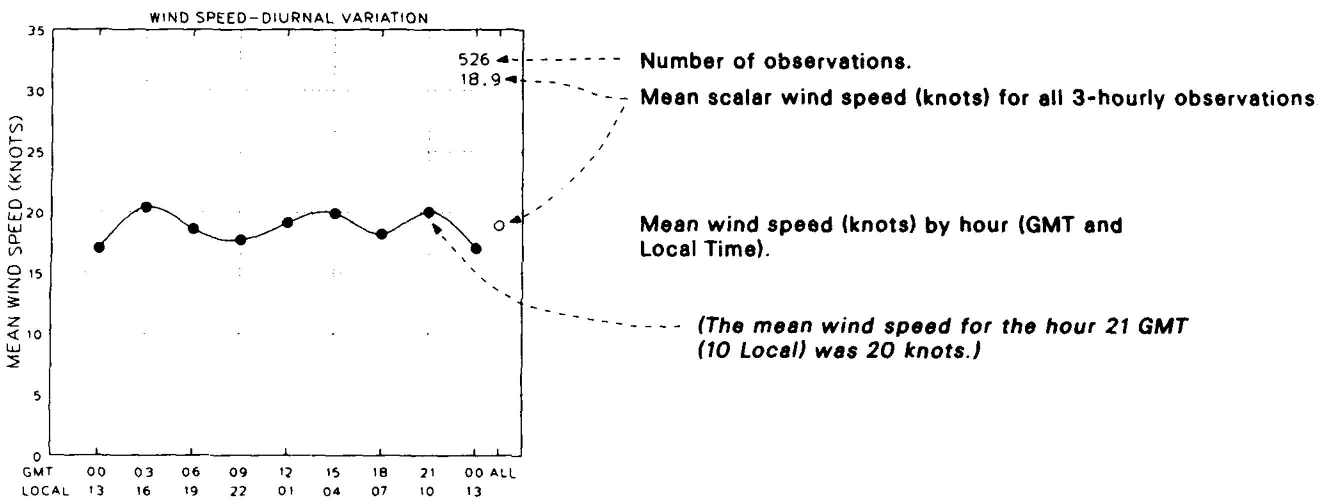
Map 13. Scalar mean wind speed and wind chill temperature ≦-30°C

BLACK LINE – Mean scalar wind speed (knots).

BLUE LINE – Percent frequency of wind chill temperature ≦–30°C (≦–22°F).

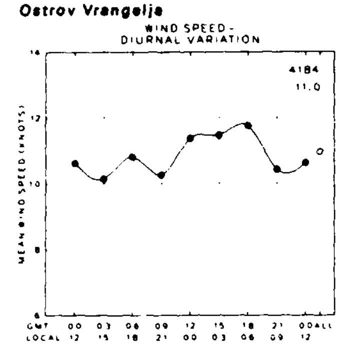
Albers Equal–Area Conic Projection

Graphs: Wind speed/diurnal variation

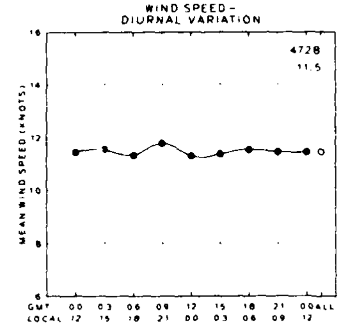


In areas of high persistence (also called constancy, steadiness) of direction, the magnitude of the vector mean wind (Set 10) should closely approach that of the scalar mean wind (set 13). As most of the marine observations are recorded at six-hour intervals (00, 06, 12, 18 GMT), intermediate hours (03, 09, 15, 21 GMT) were not plotted on the graphs for the marine areas. Intermediate hours were plotted for the stations, but users should use caution in interpreting plots for those few stations that reported less than eight observations per day—see the data inventory in the introductory text for Section II.

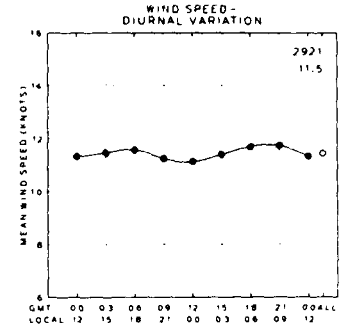
Ostrov Vrangelja



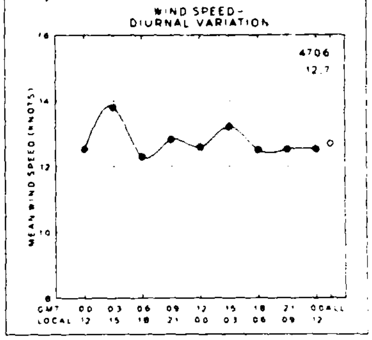
Mys Shmidta



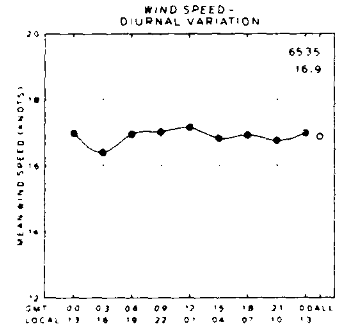
Ostrov Kolychino



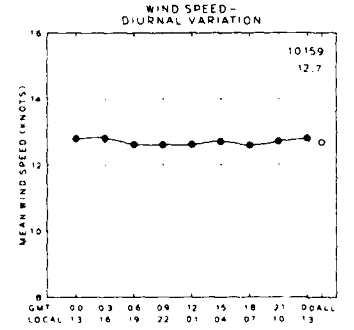
Mys Uelen



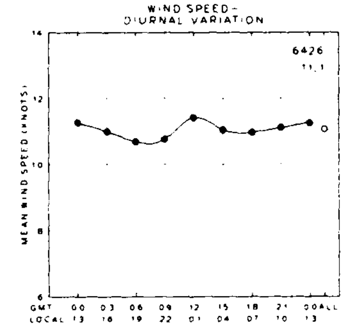
Tin City



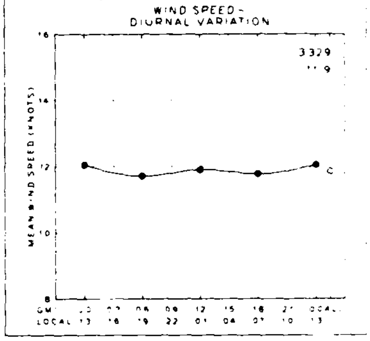
Kotzebue



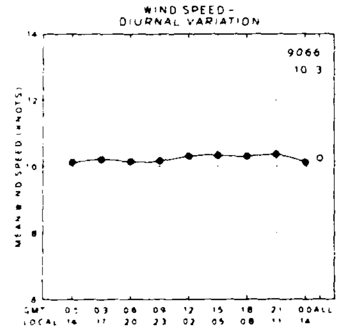
Cape Lisburne



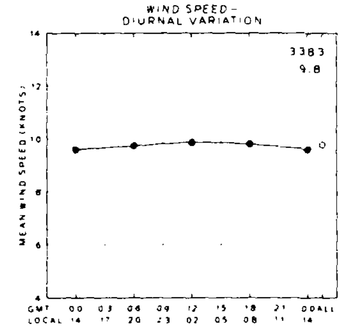
Point Lay



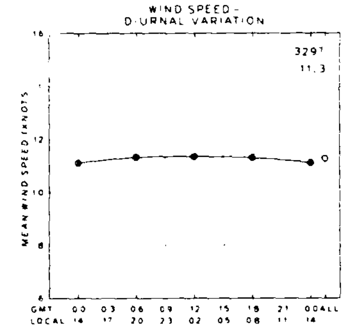
Barrow



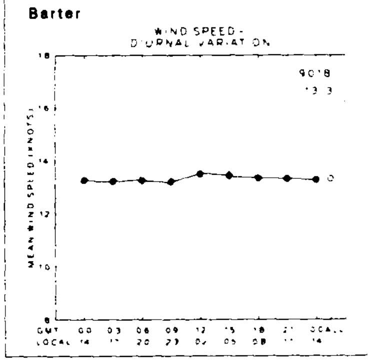
Lonely



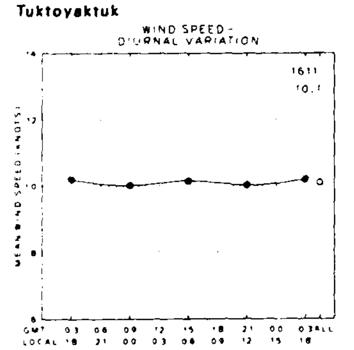
Oliktok



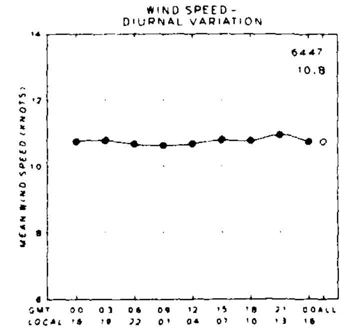
Barter



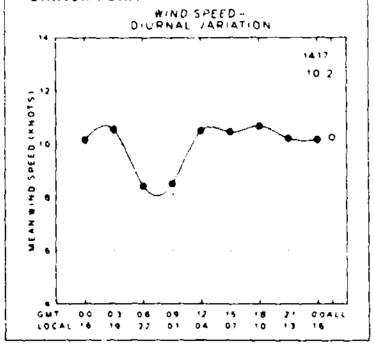
Tuktoyaktuk



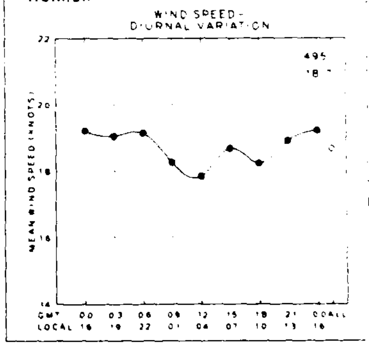
Cape Parry

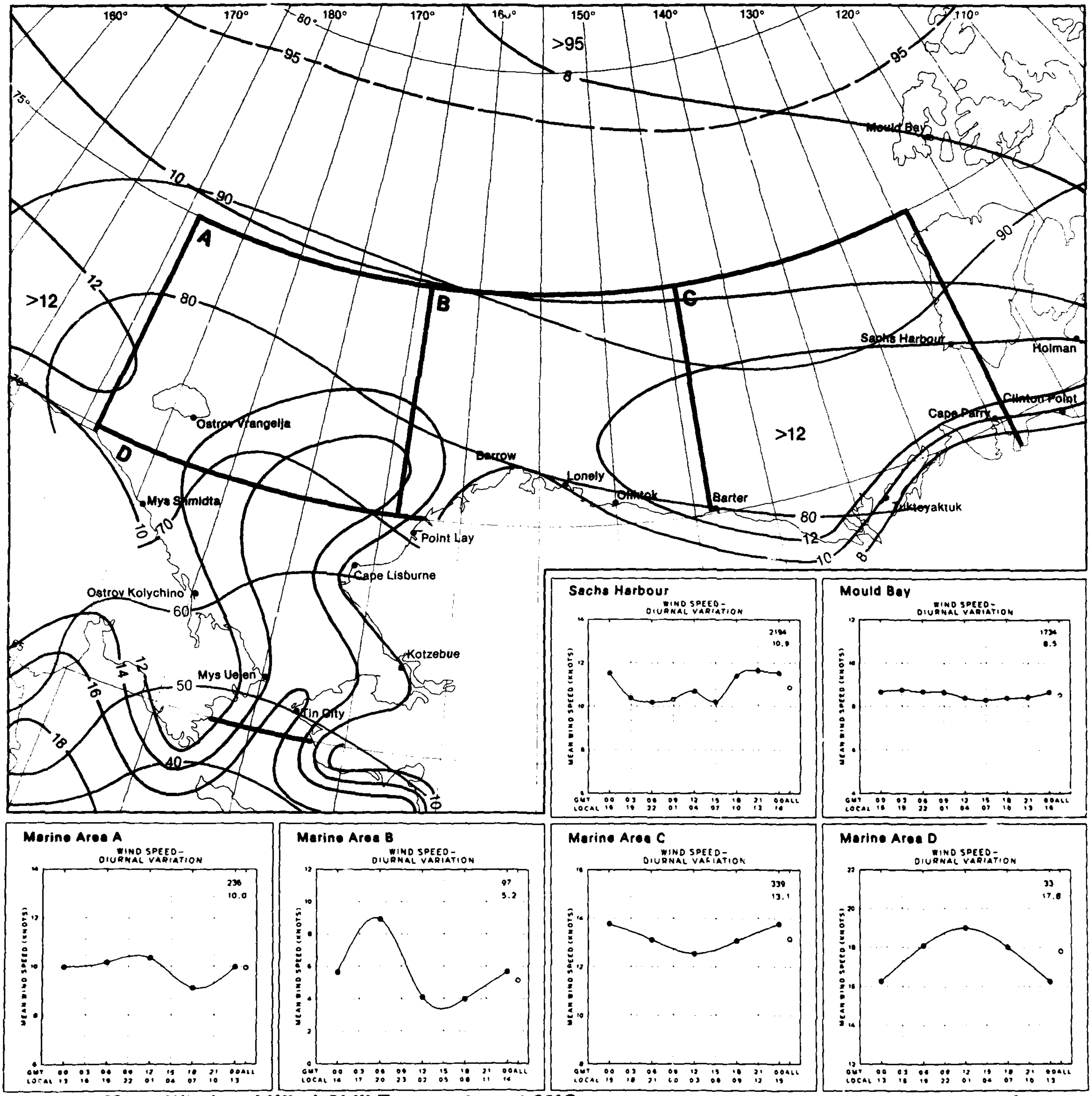


Clinton Point



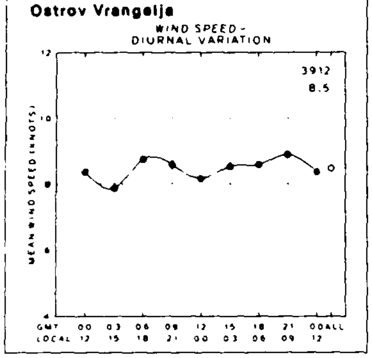
Holman



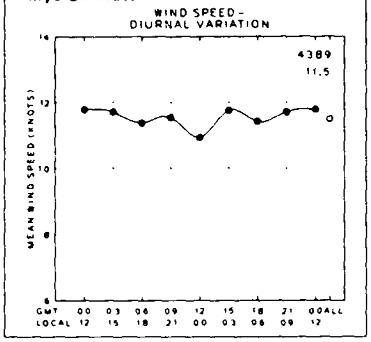


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **January**

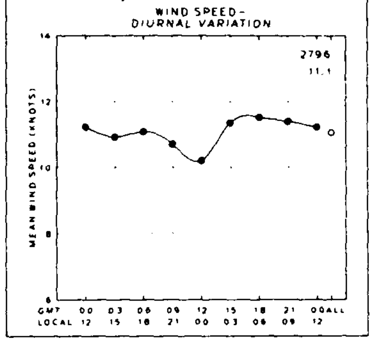
Ostrov Vrangelja



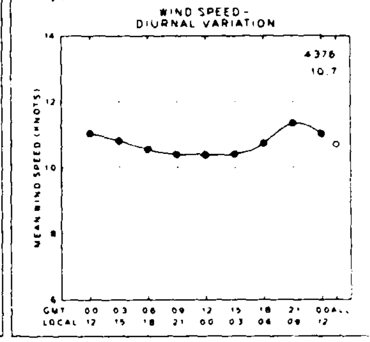
Mys Shmidte



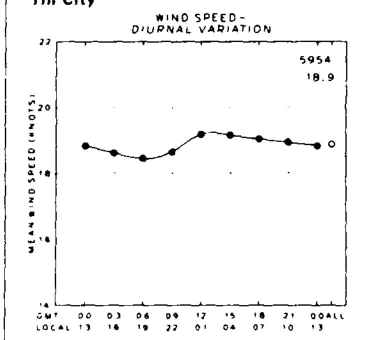
Ostrov Kolychino



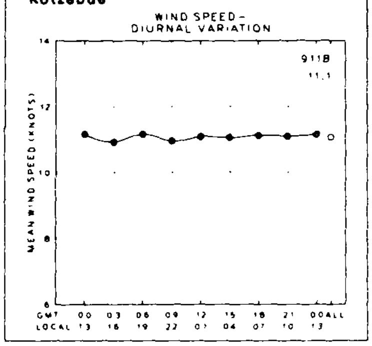
Mys Uelen



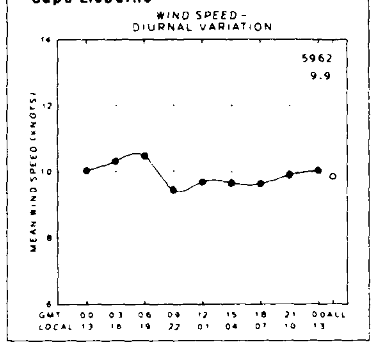
Tin City



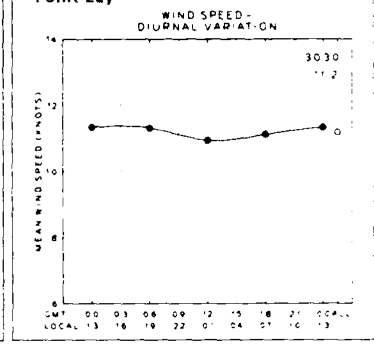
Kotzebue



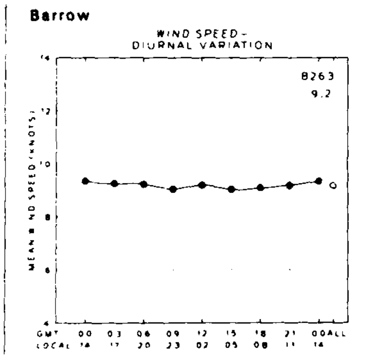
Cape Lisburne



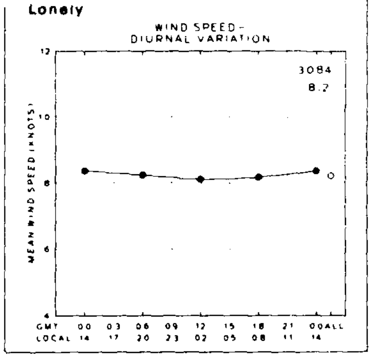
Point Lay



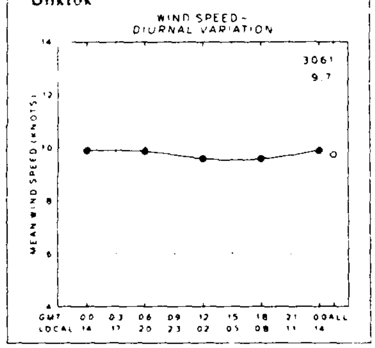
Barrow



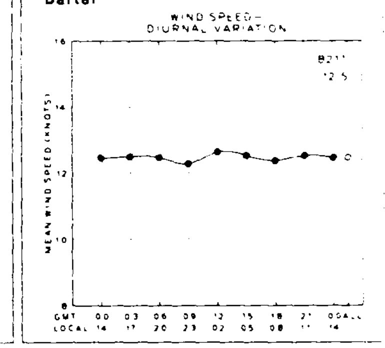
Lonely



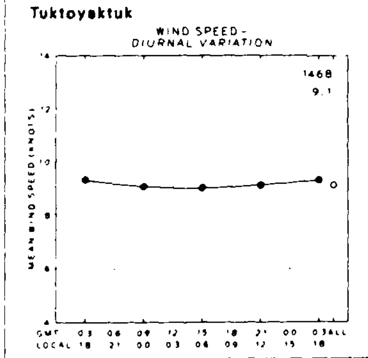
Oliktok



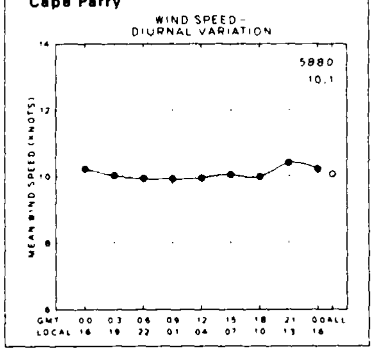
Barter



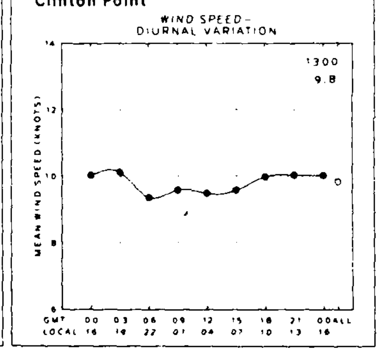
Tuktoyaktuk



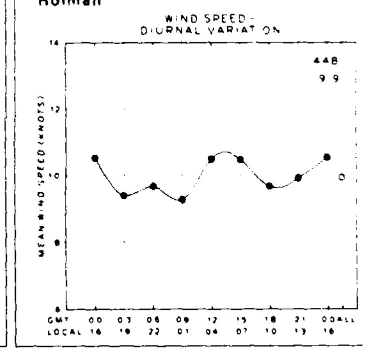
Cape Parry

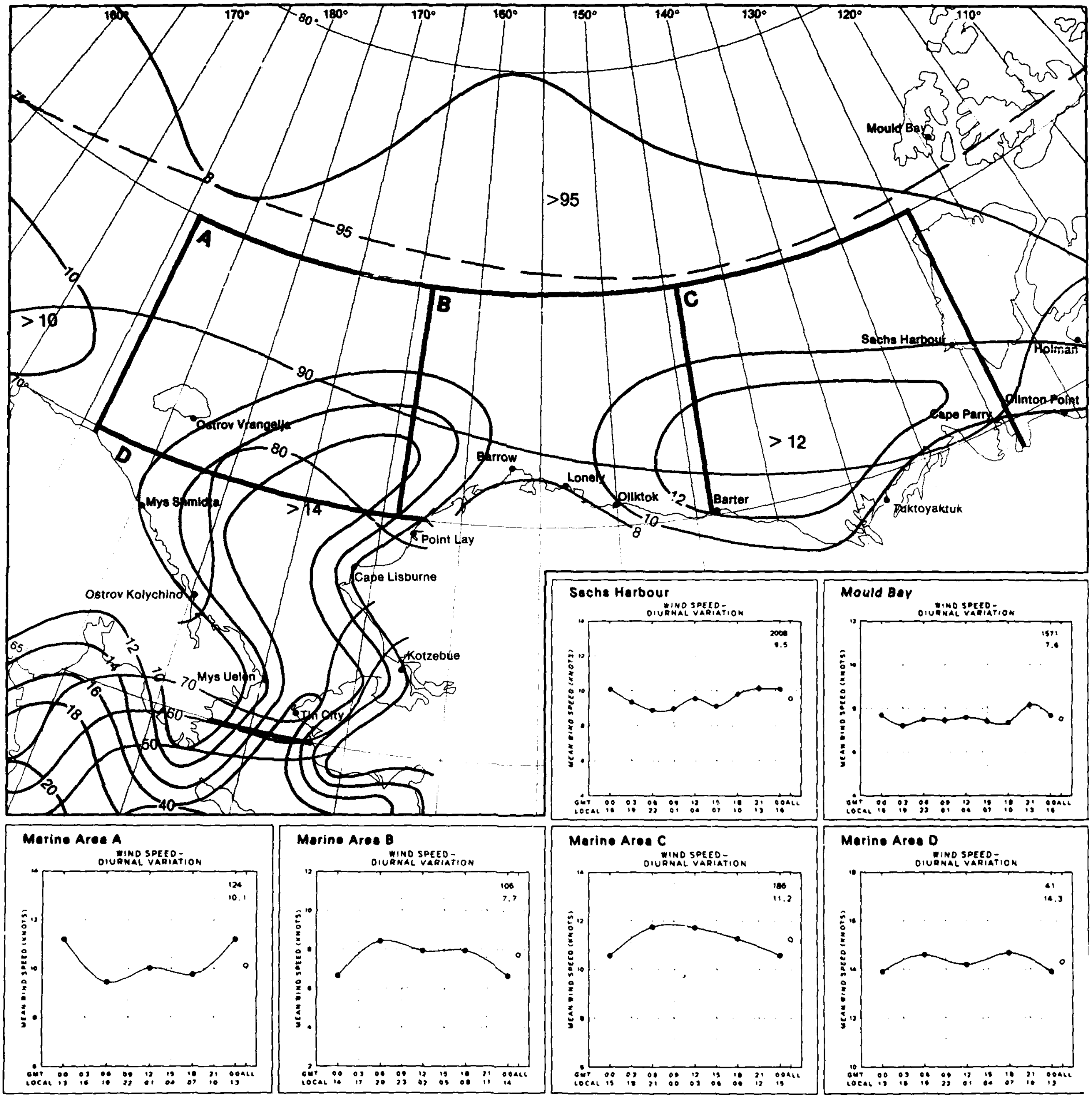


Clinton Point



Holman

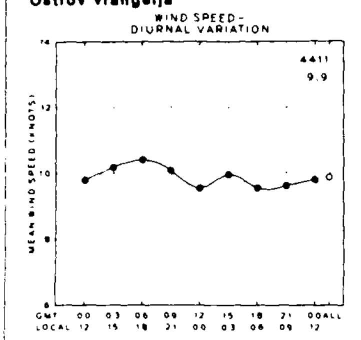




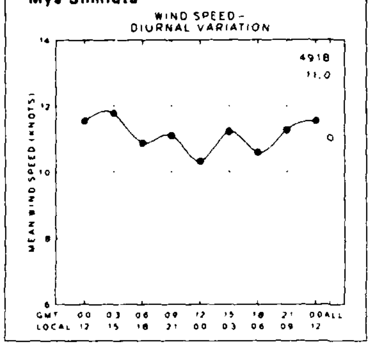
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

February

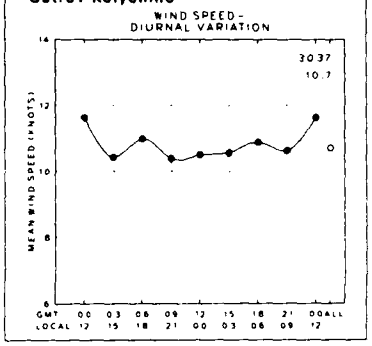
Ostrov Vrangelja



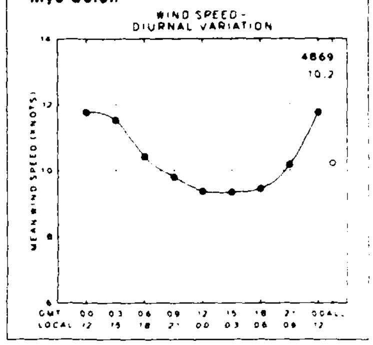
Mys Shmidta



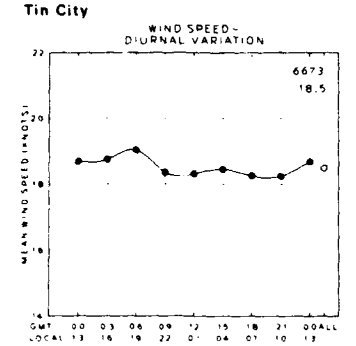
Ostrov Kolychino



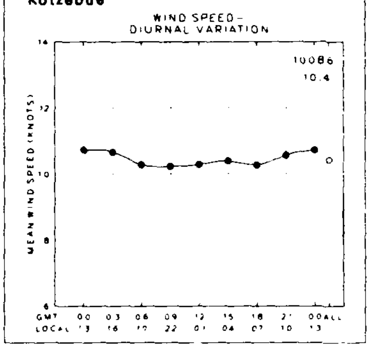
Mys Uelen



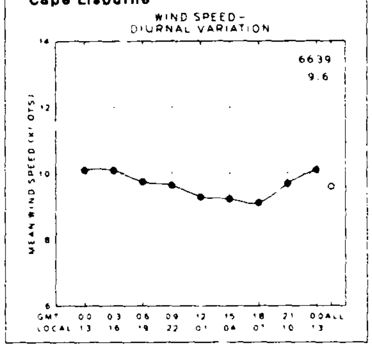
Tin City



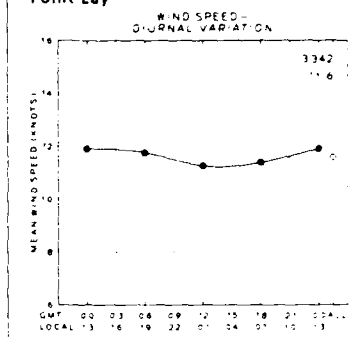
Kotzebue



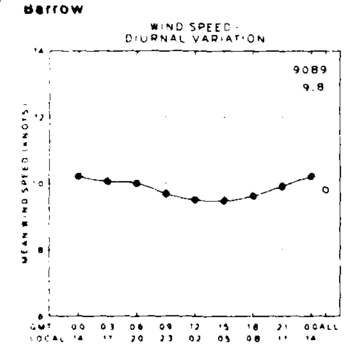
Cape Lisburne



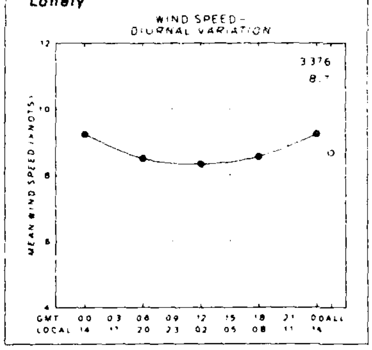
Point Lay



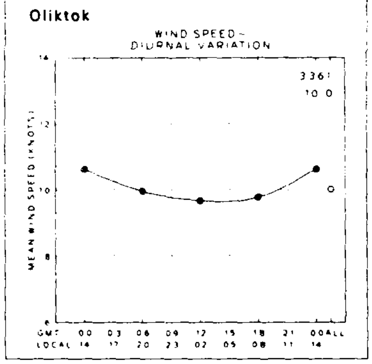
Barrow



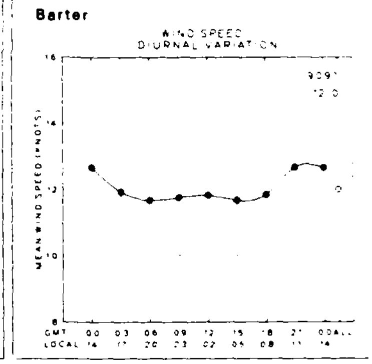
Lonely



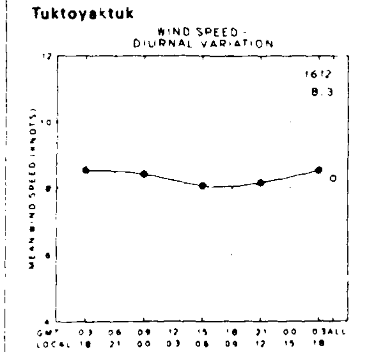
Oliktok



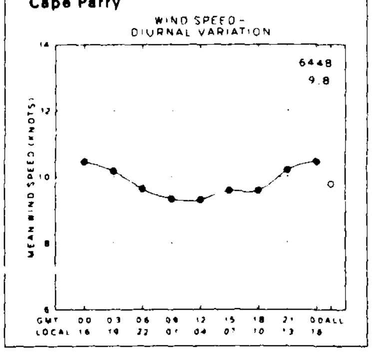
Barter



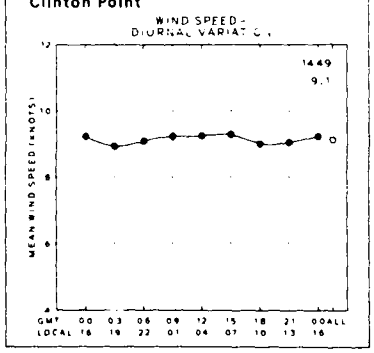
Tuktoyaktuk



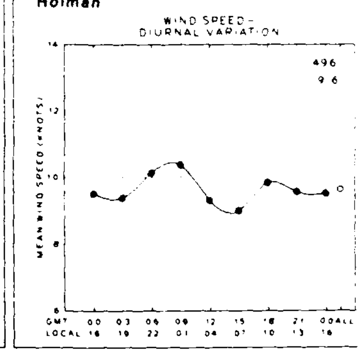
Cape Parry

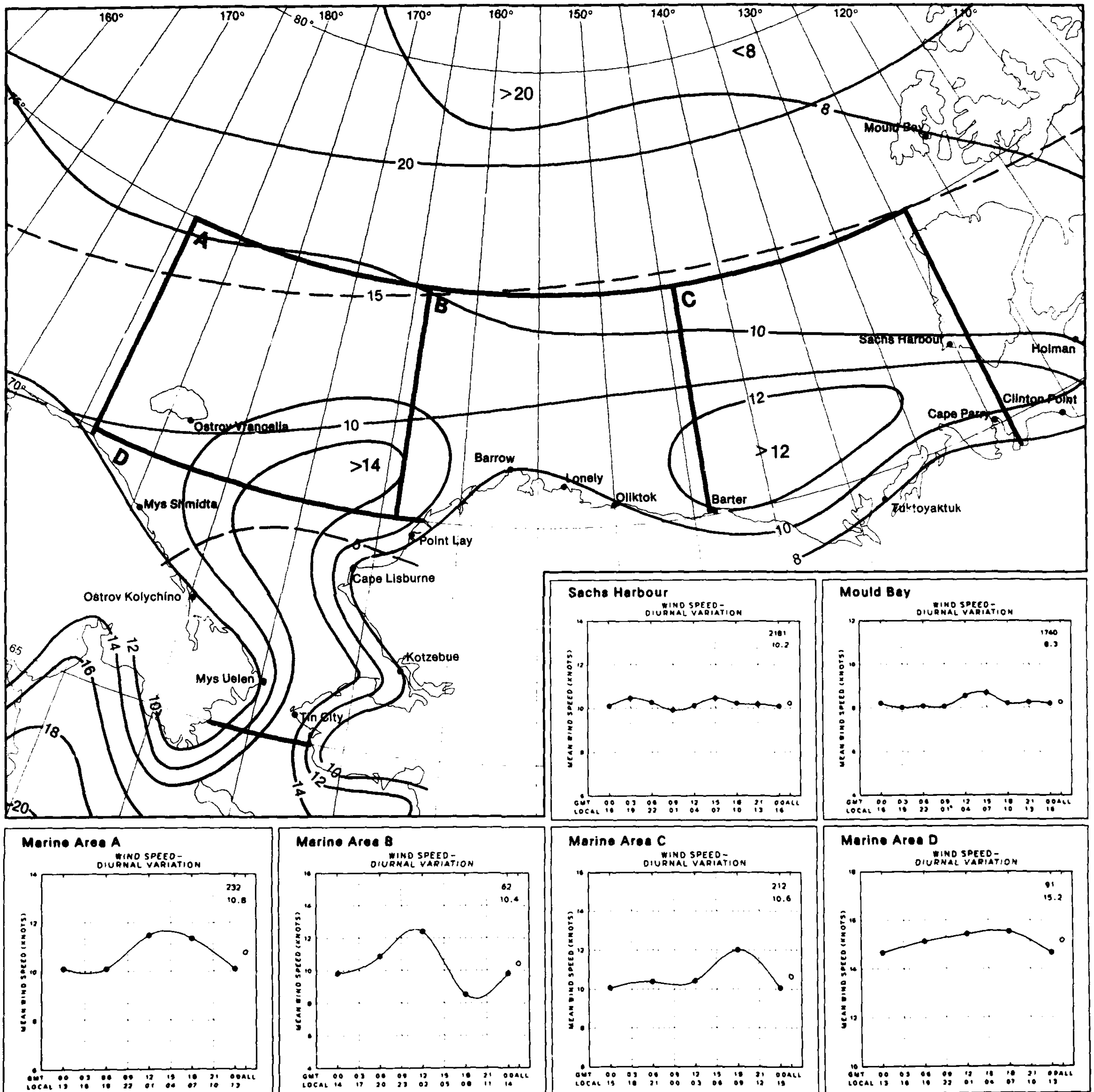


Clinton Point



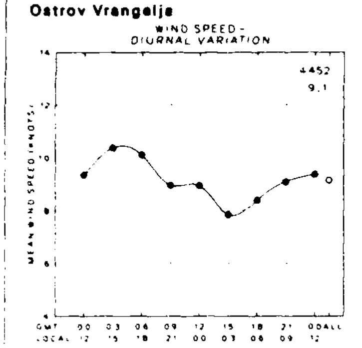
Holman



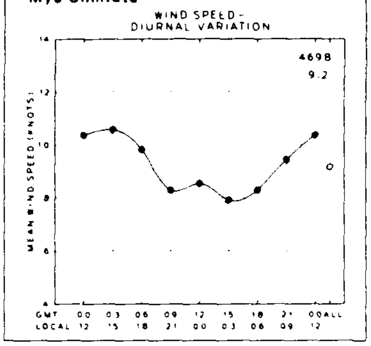


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **March**

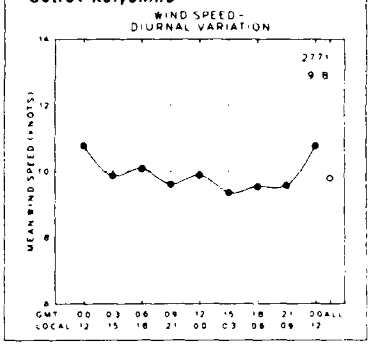
Ostrov Vrangelja



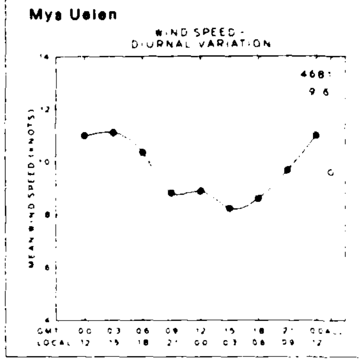
Mys Shmidta



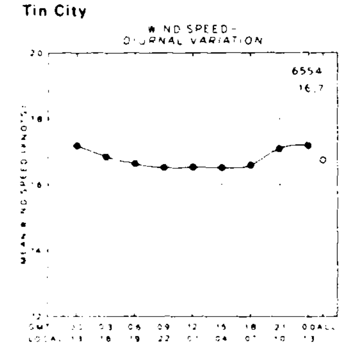
Ostrov Kolychino



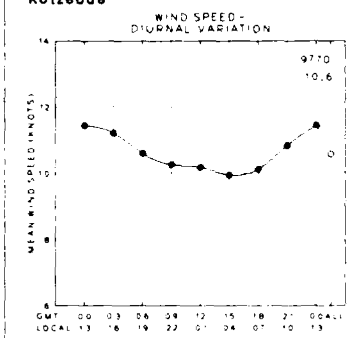
Mys Uelen



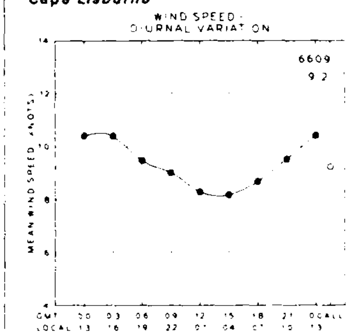
Tin City



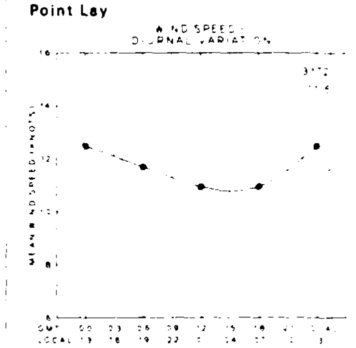
Kotzebue



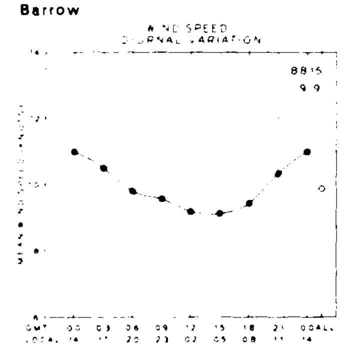
Cape Lisburne



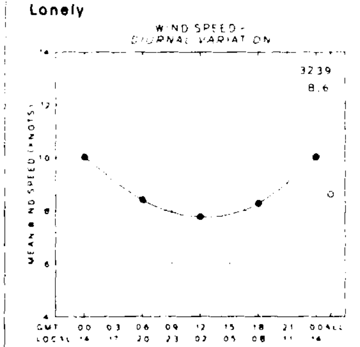
Point Lay



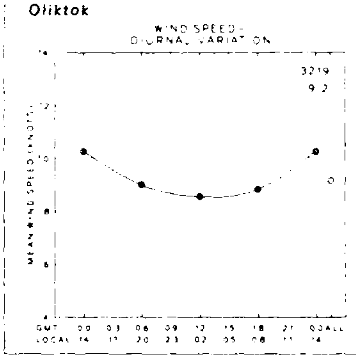
Barrow



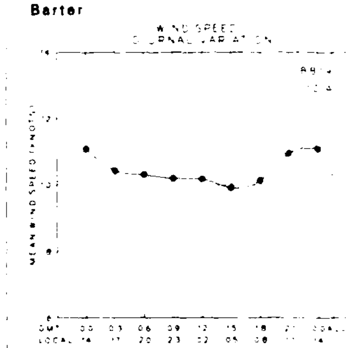
Lonely



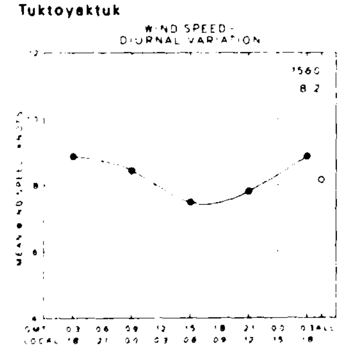
Oliktok



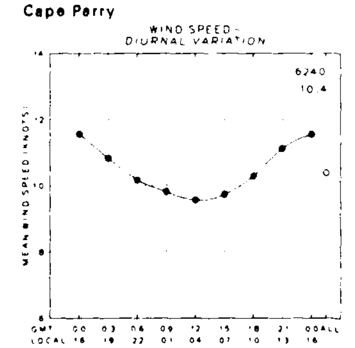
Barter



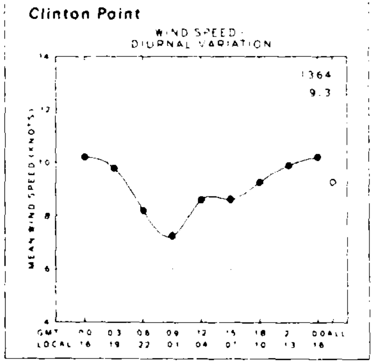
Tuktoyaktuk



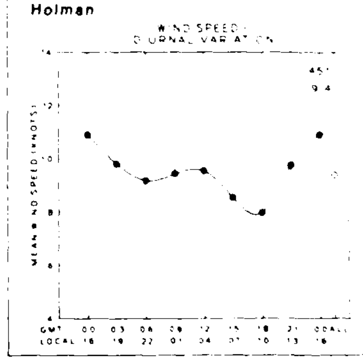
Cape Parry

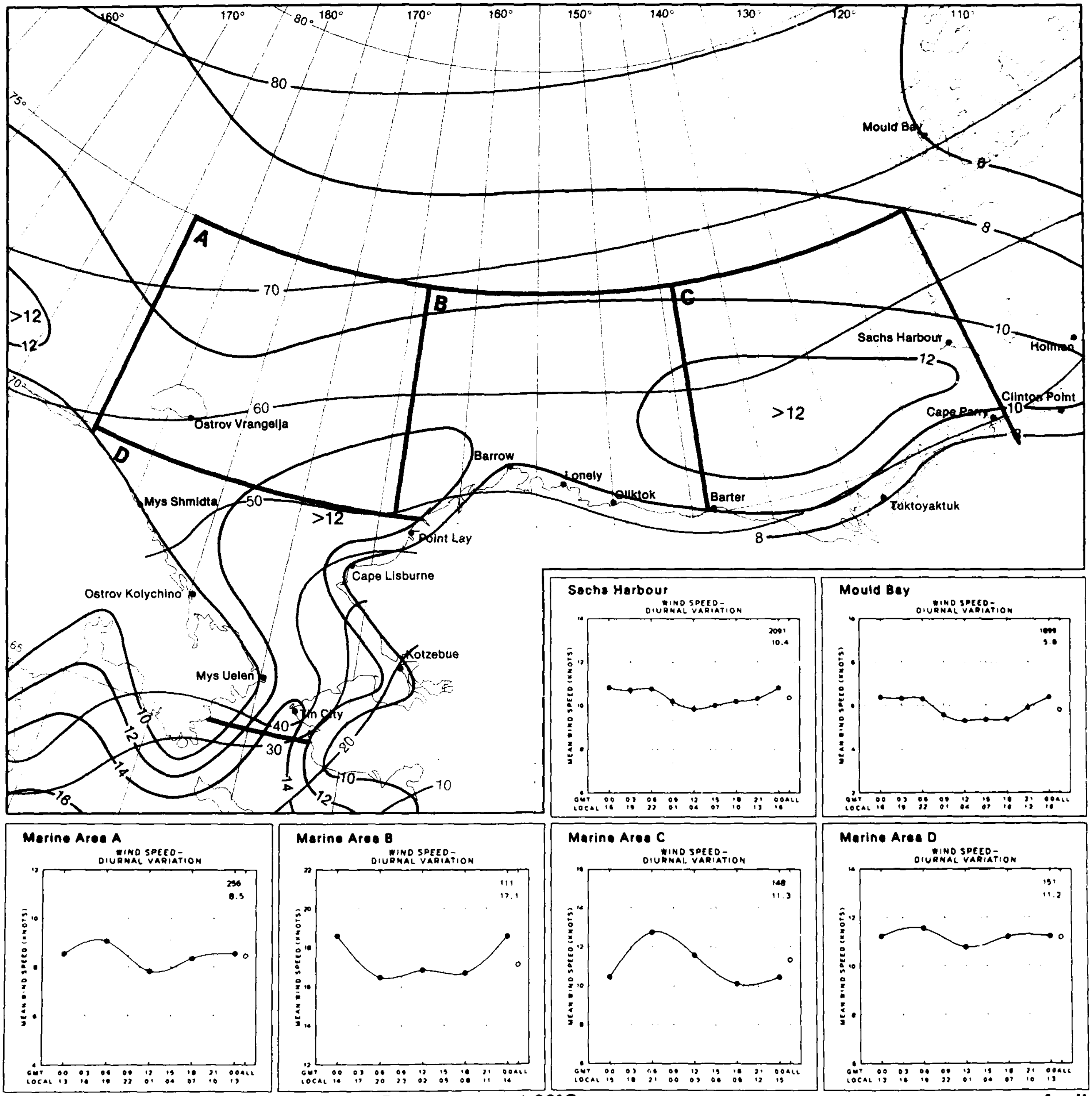


Clinton Point



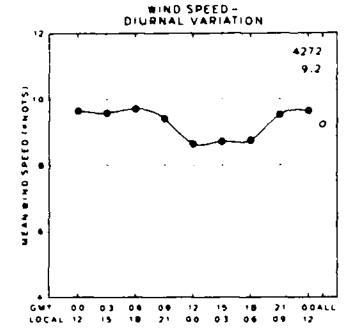
Holman



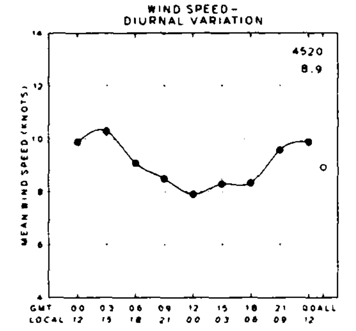


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **April**

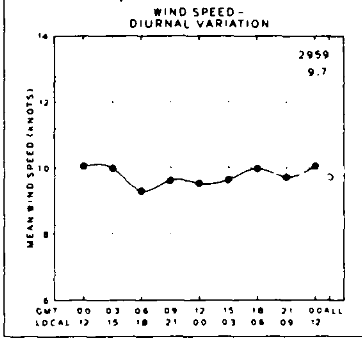
Ostrov Vrangelja



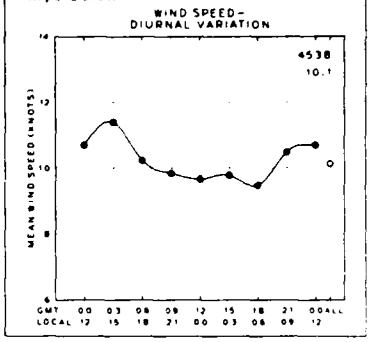
Mys Shmidta



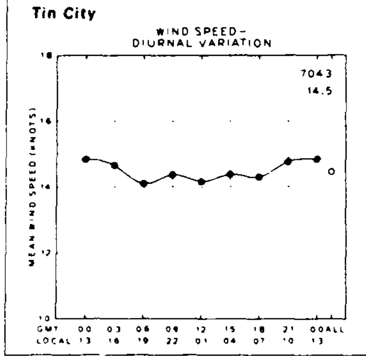
Ostrov Kolychino



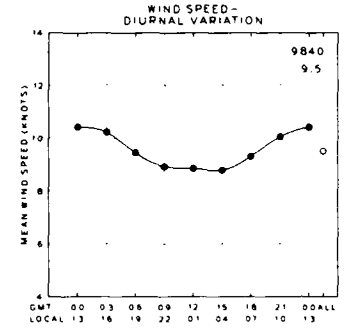
Mys Uelen



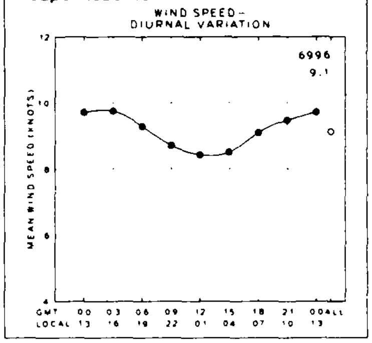
Tin City



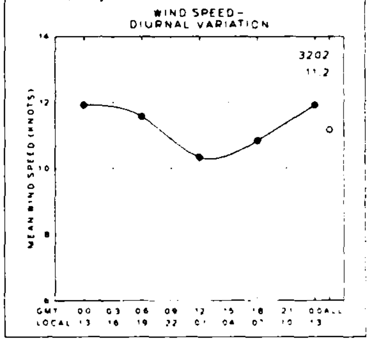
Kotzebue



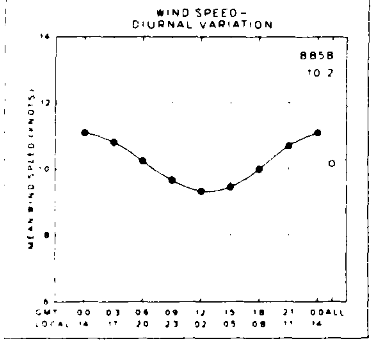
Cape Lisburne



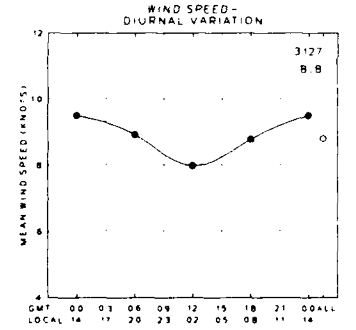
Point Lay



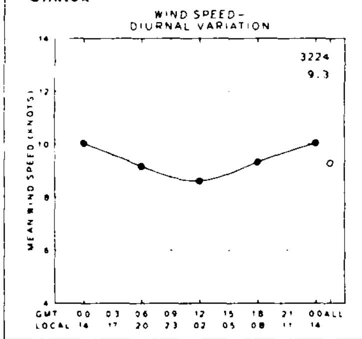
Barrow



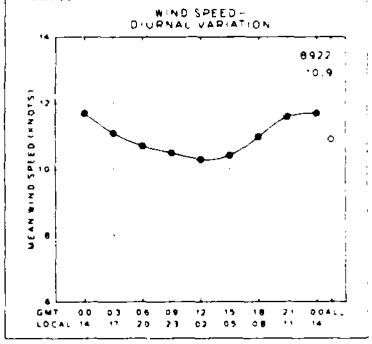
Lonely



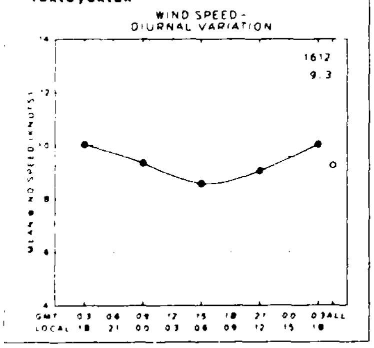
Oliktok



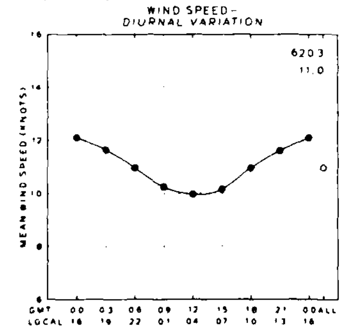
Barter



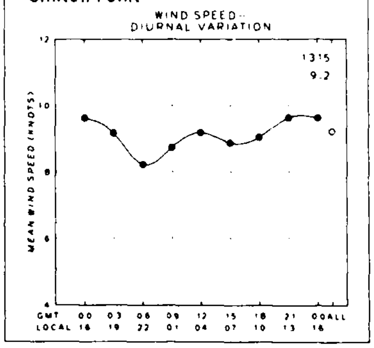
Tuktoyaktuk



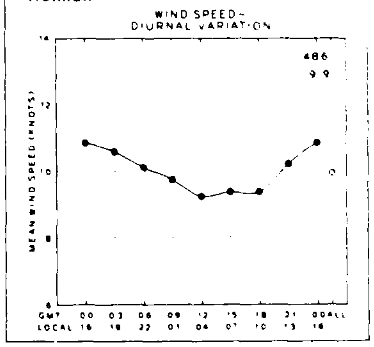
Cape Parry

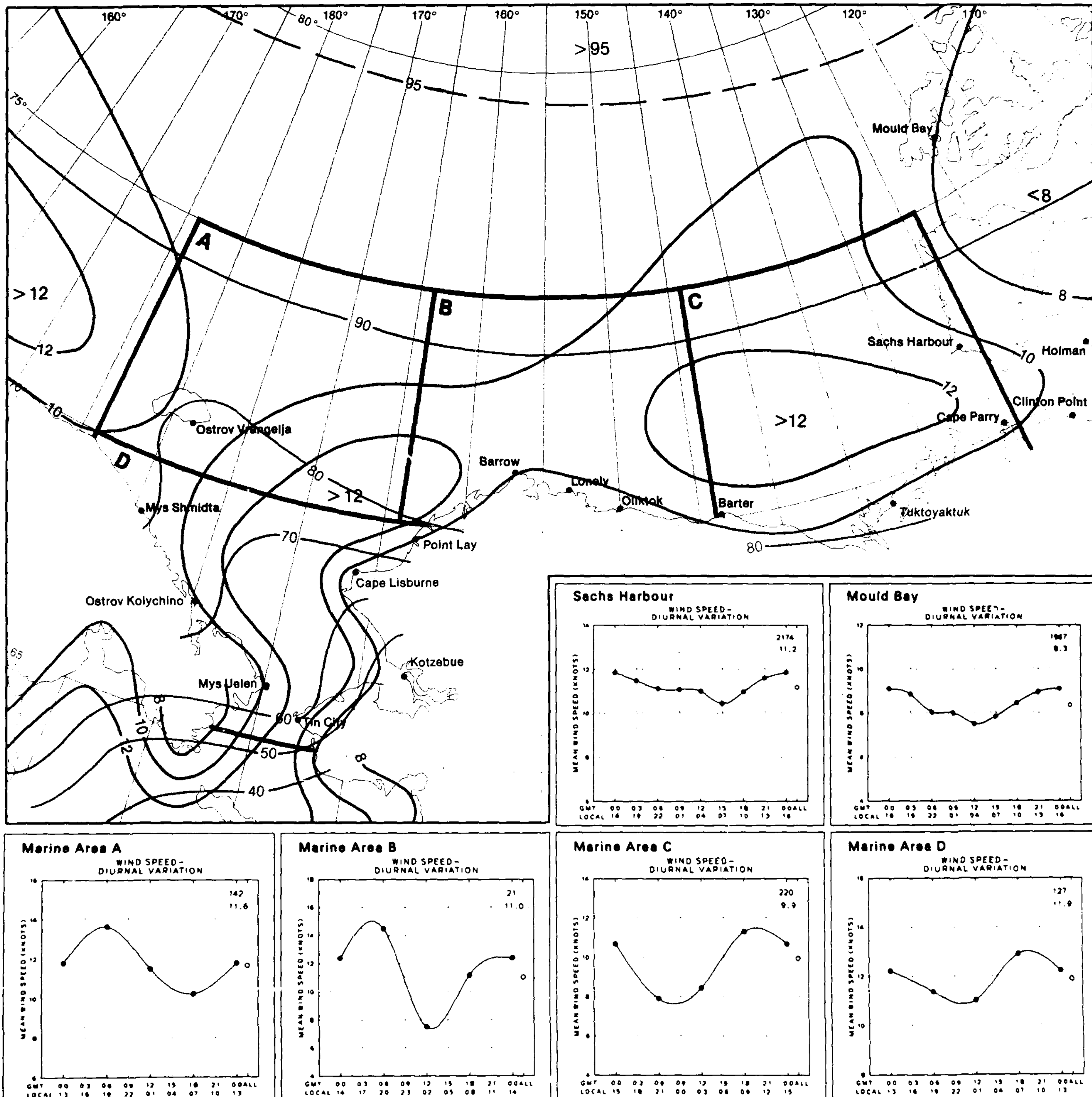


Clinton Point



Holman

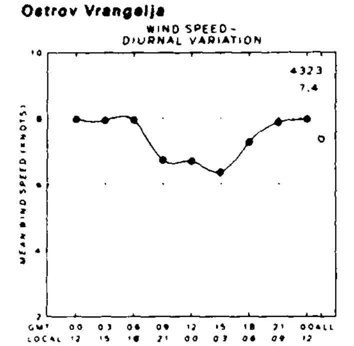




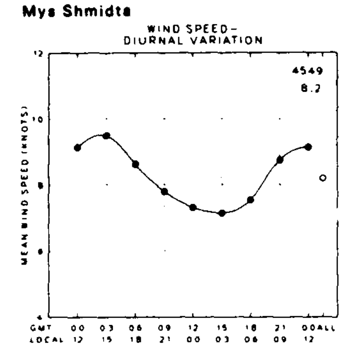
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

May

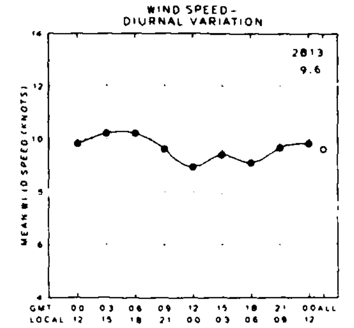
Ostrov Vrangelja



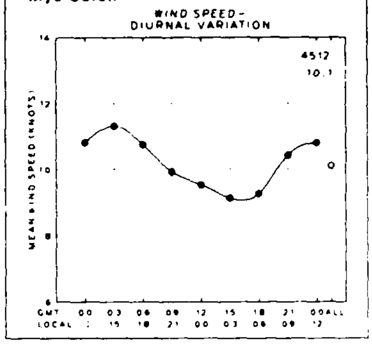
Mys Shmidta



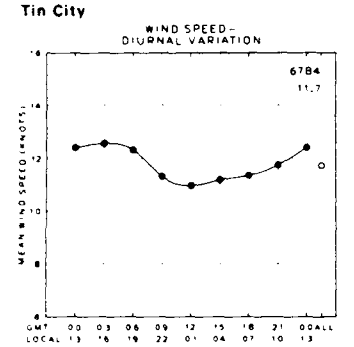
Ostrov Kolychino



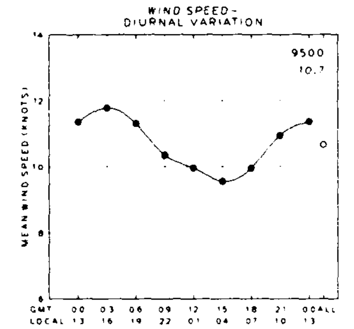
Mys Uelen



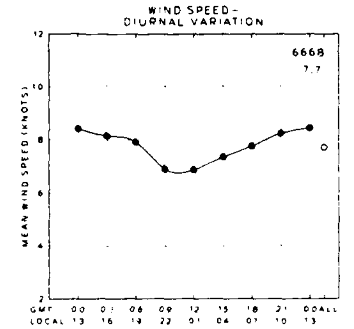
Tin City



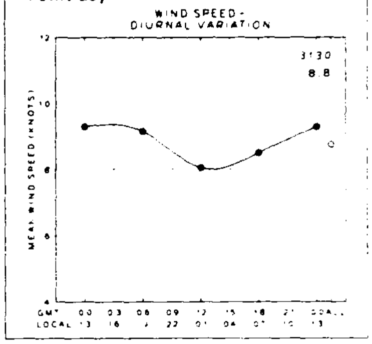
Kotzebue



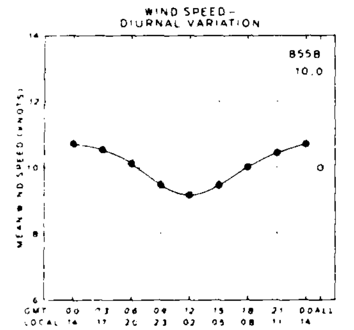
Cape Lisburne



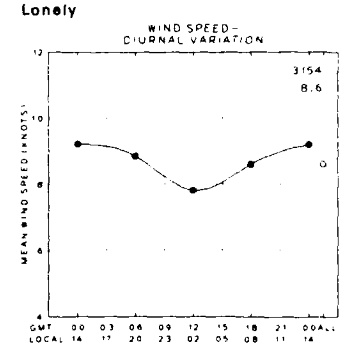
Point Lay



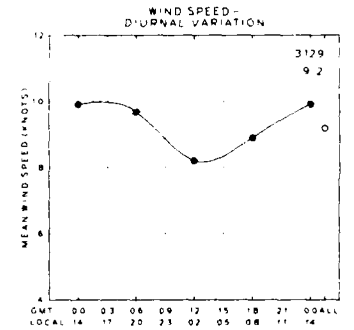
Barrow



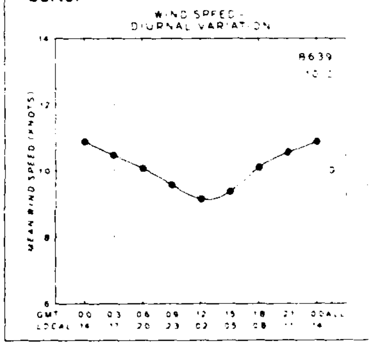
Lonely



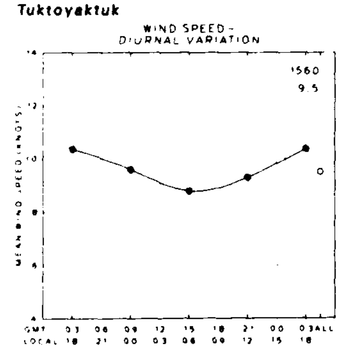
Oliktok



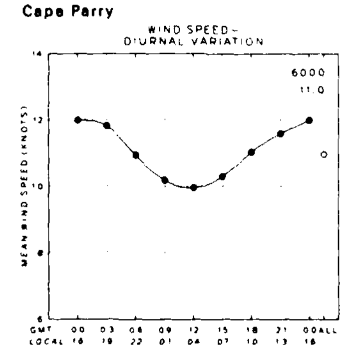
Barter



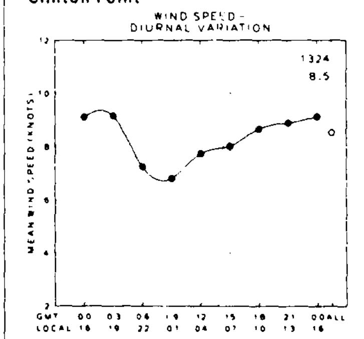
Tuktoyaktuk



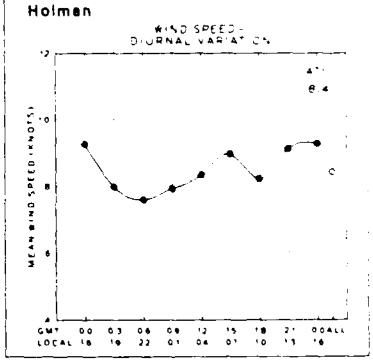
Cape Parry

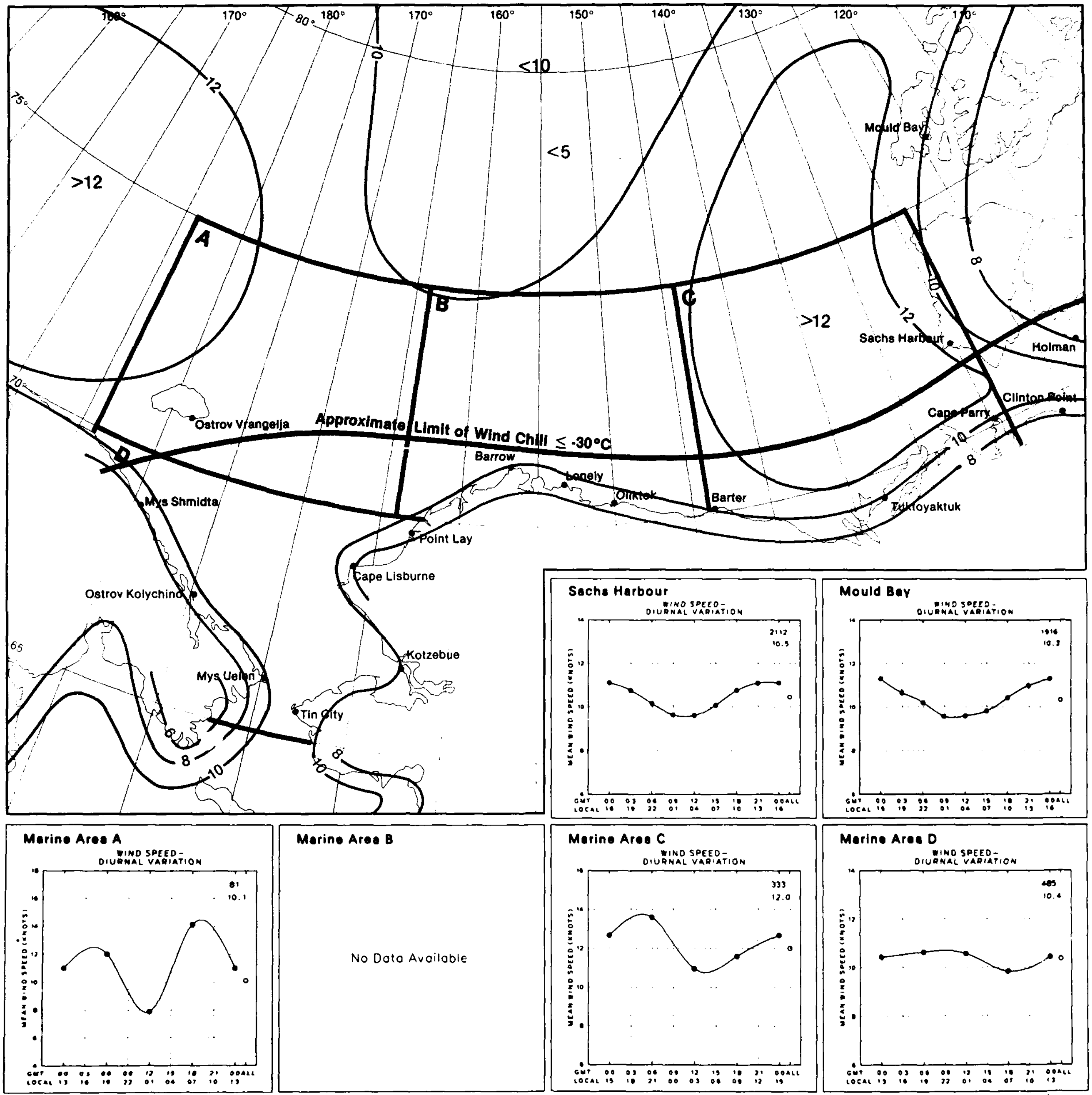


Clinton Point



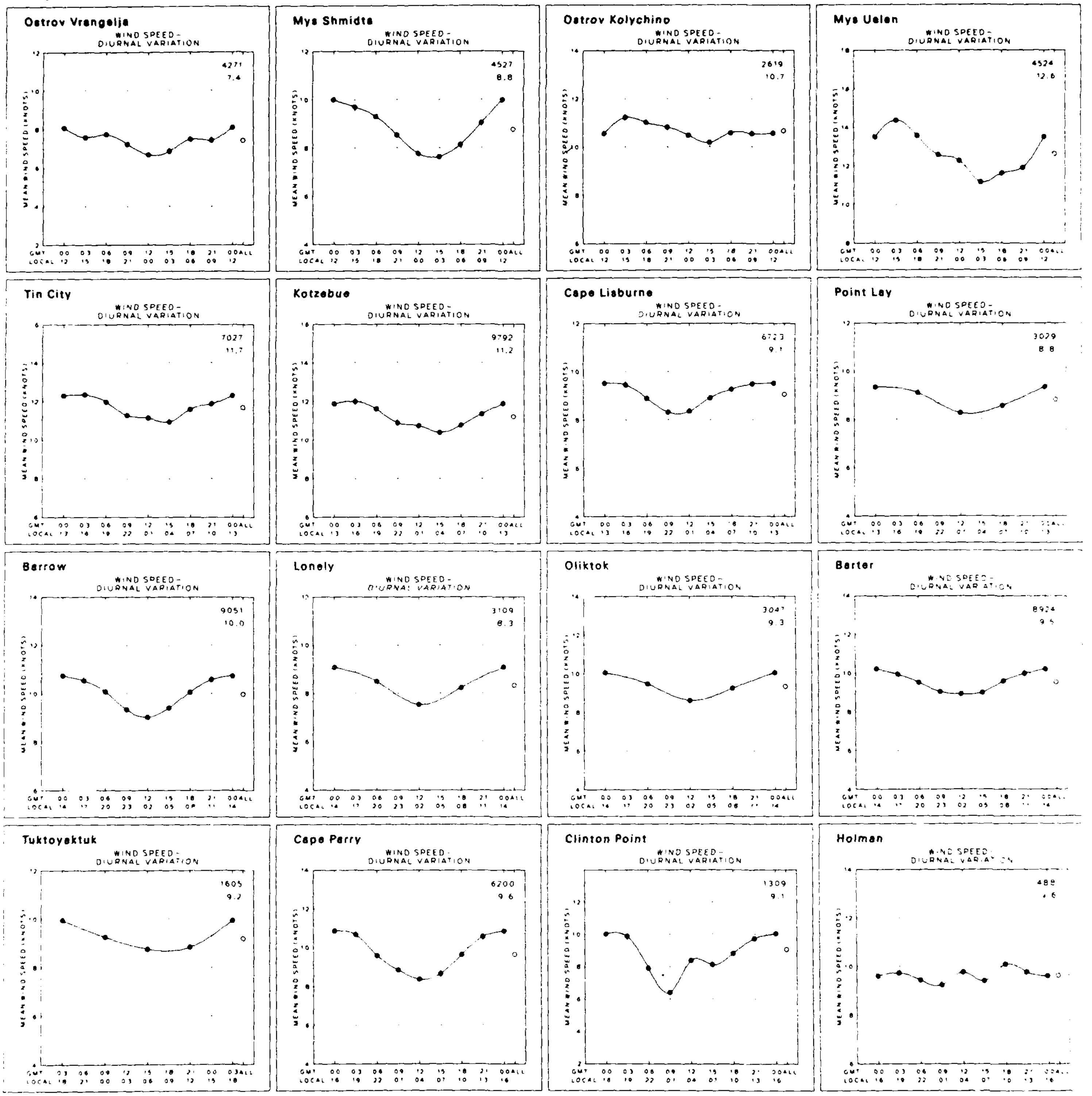
Holmen

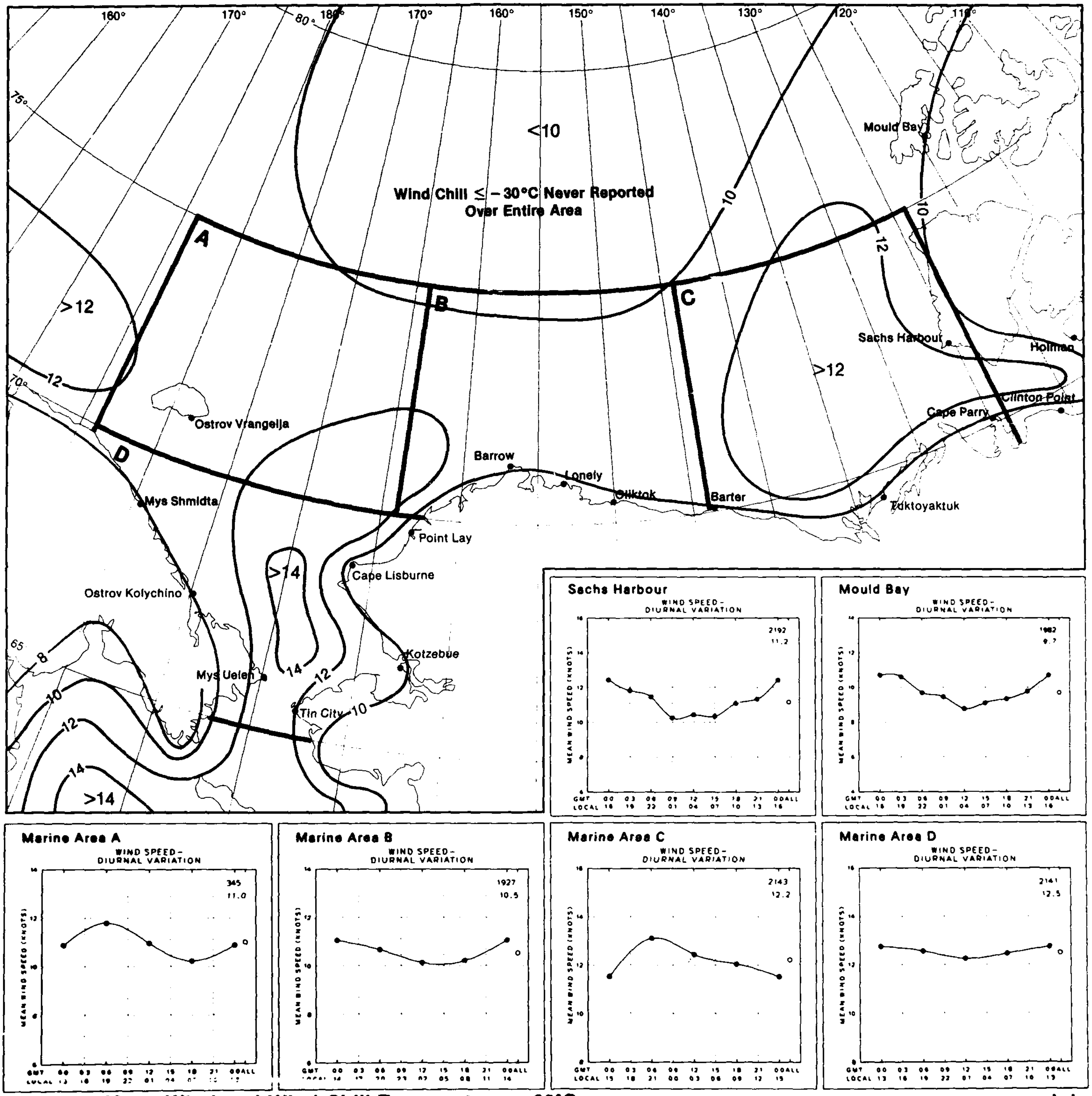




13 Scalar Mean Wind and Wind Chill Temperature ≤-30°C

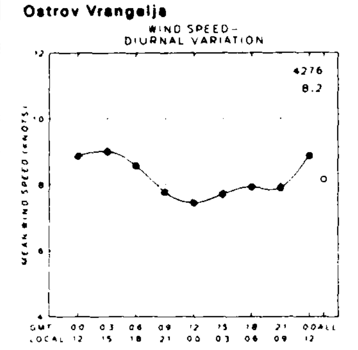
June


Ostrov Vrangelja
WIND SPEED - DIURNAL VARIATION
4271
7.4
Mys Shmidta
WIND SPEED - DIURNAL VARIATION
4527
8.8
Ostrov Kolychino
WIND SPEED - DIURNAL VARIATION
2619
10.7
Mys Uelen
WIND SPEED - DIURNAL VARIATION
4524
12.6
Tin City
WIND SPEED - DIURNAL VARIATION
7027
11.7
Kotzebue
WIND SPEED - DIURNAL VARIATION
9792
11.2
Cape Lisburne
WIND SPEED - DIURNAL VARIATION
6723
Point Lay
WIND SPEED - DIURNAL VARIATION
3029
8.8
Barrow
WIND SPEED - DIURNAL VARIATION
9051
10.0
Lonely
WIND SPEED - DIURNAL VARIATION
3109
8.3
Oliktok
WIND SPEED - DIURNAL VARIATION
9.3
Barter
Tuktoyaktuk
WIND SPEED - DIURNAL VARIATION
1605
9.2
Cape Perry
WIND SPEED - DIURNAL VARIATION
6200
9.6
Clinton Point
WIND SPEED - DIURNAL VARIATION
1309
9.1
Holman
MEAN WIND SPEED (KNOTS)
GMT
LOCAL

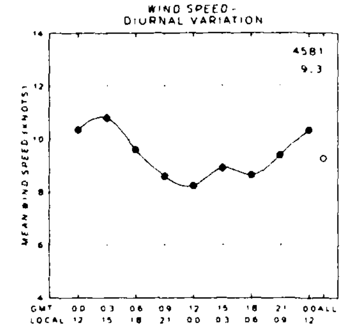


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **July**

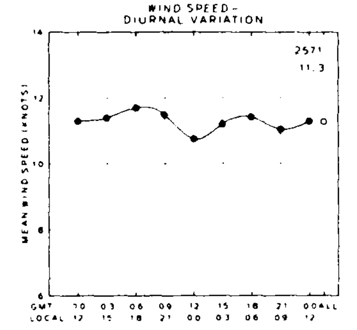
Ostrov Vrangelja



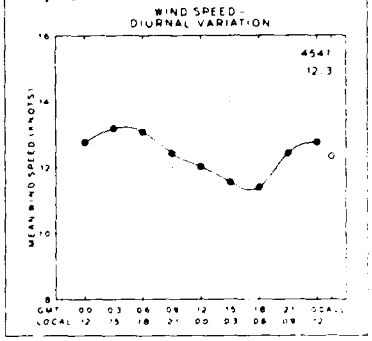
Mys Shmidta



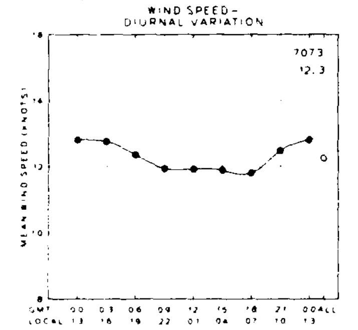
Ostrov Kolychino



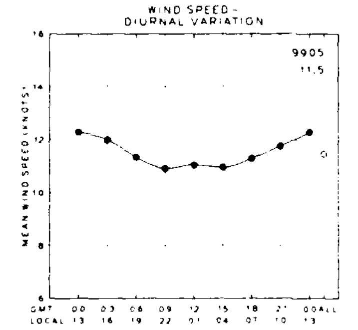
Mys Uelen



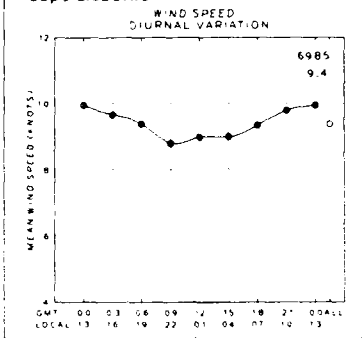
Tin City



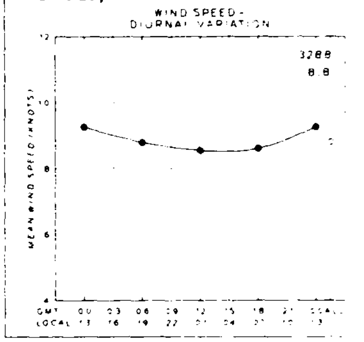
Kotzebue



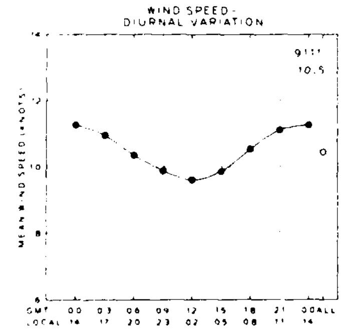
Cape Lisburne



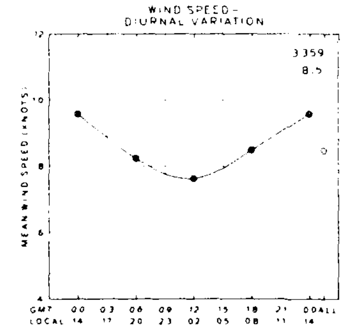
Point Lay



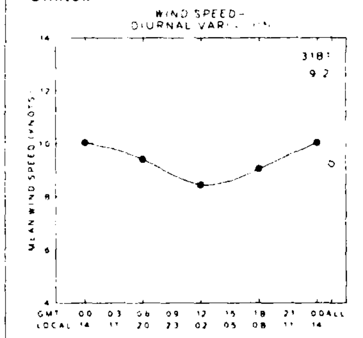
Barrow



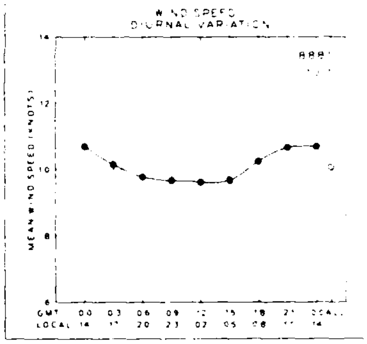
Lonely



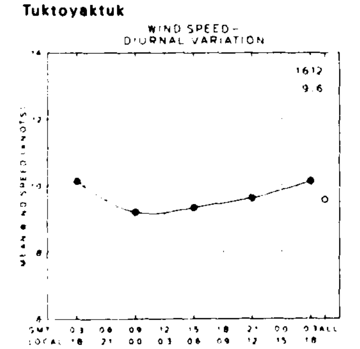
Oliktok



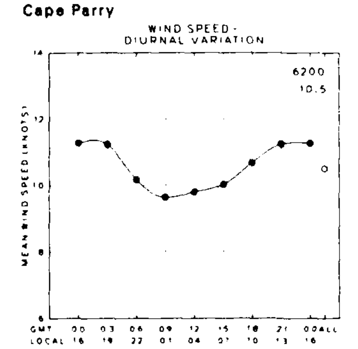
Barter



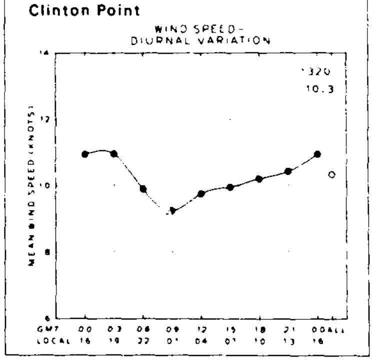
Tuktoyaktuk



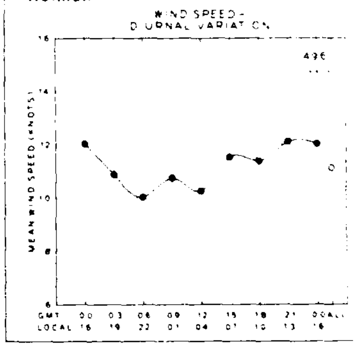
Cape Parry

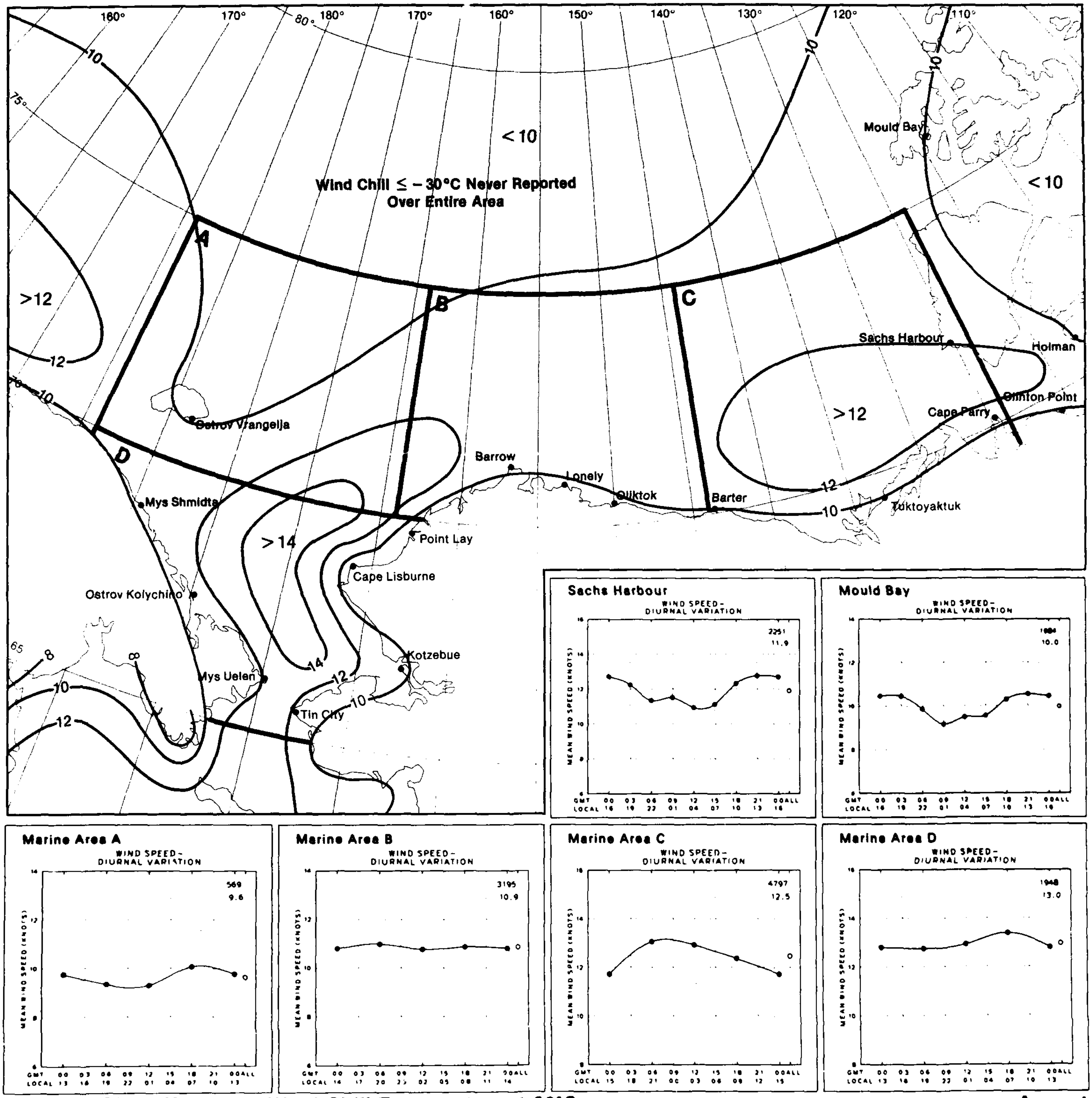


Clinton Point

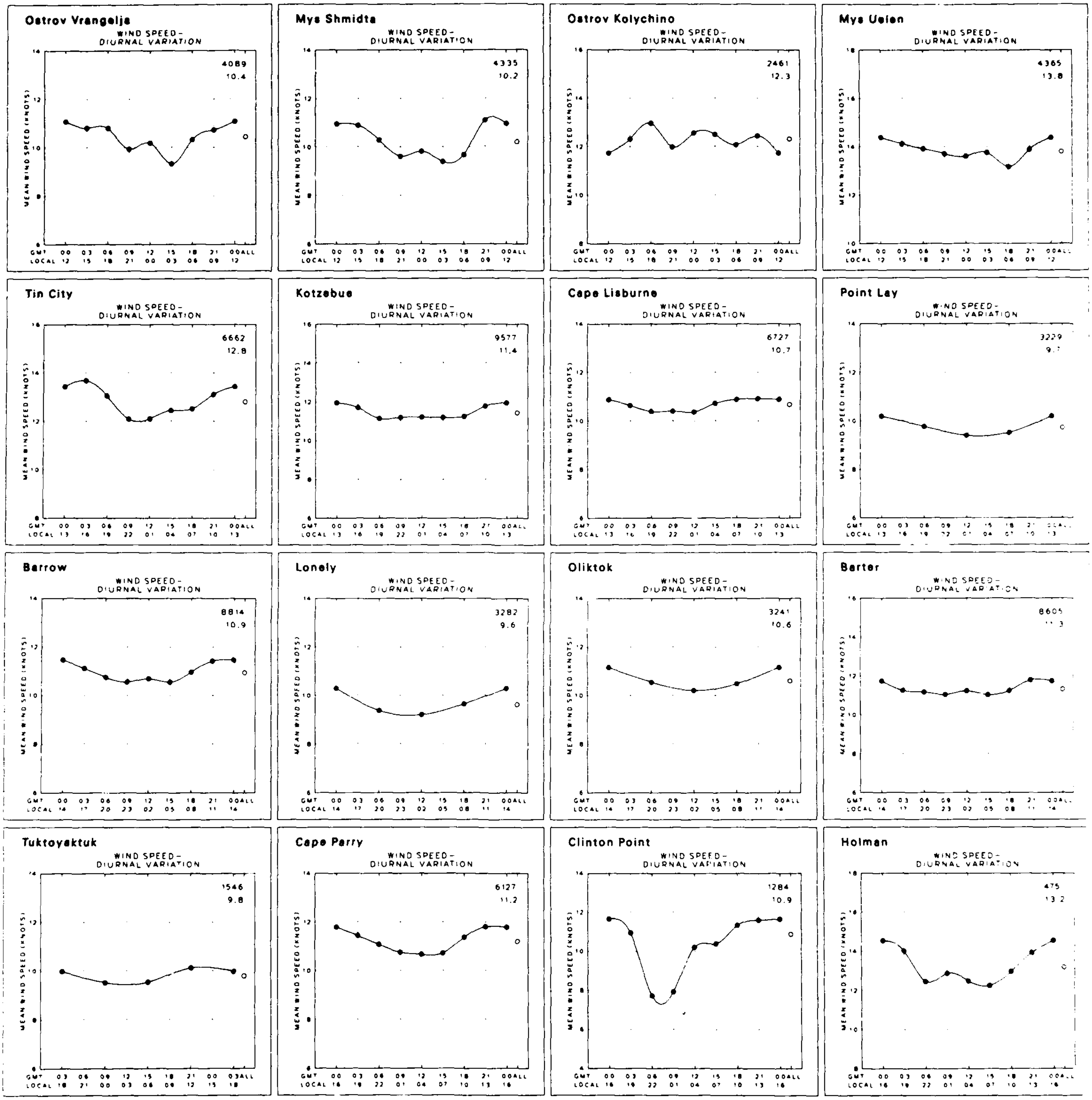


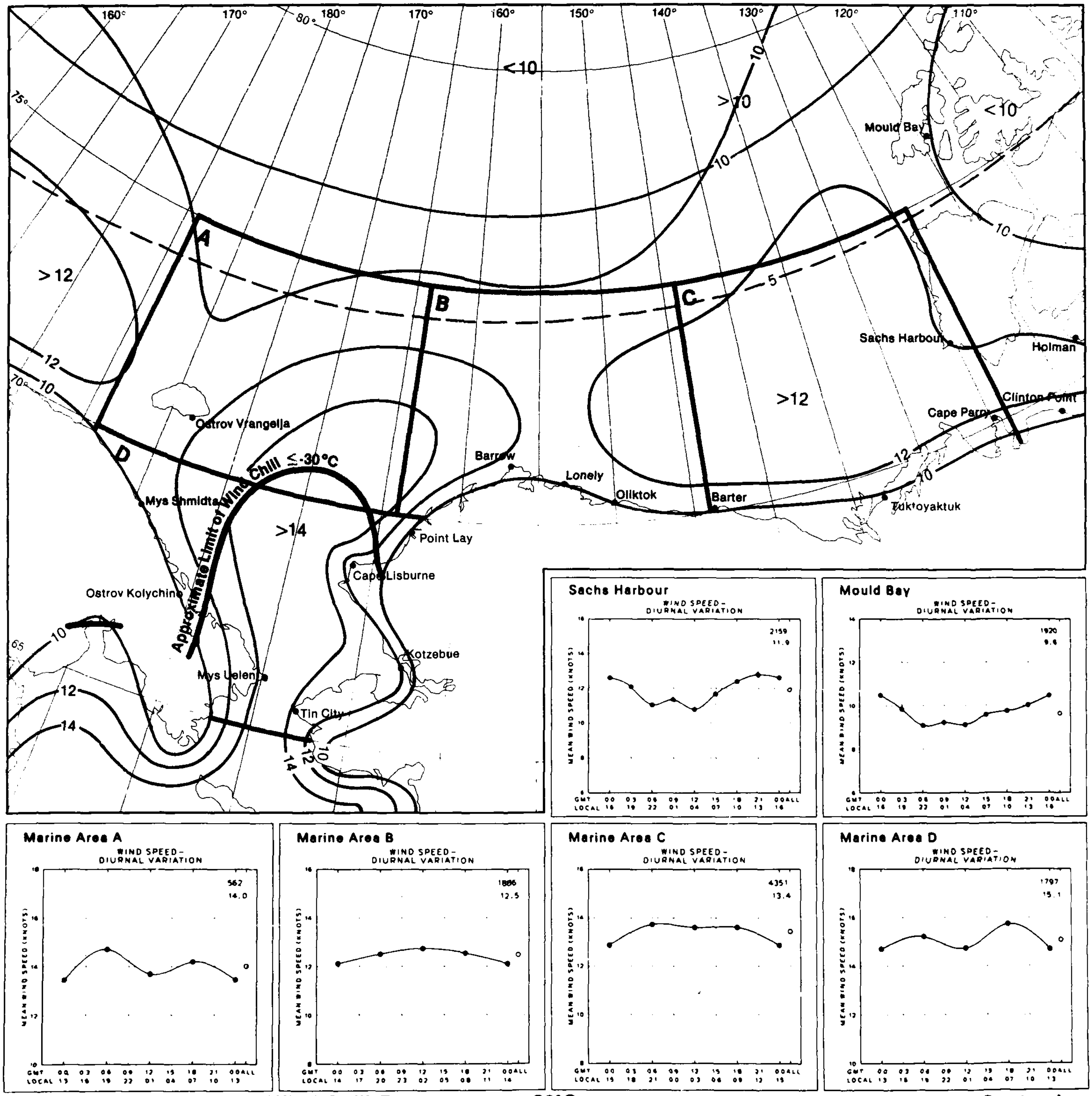
Holman





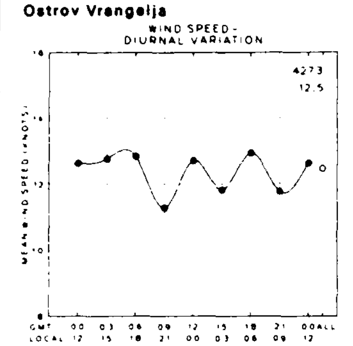
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **August**


Ostrov Vrangelja
WIND SPEED-DIURNAL VARIATION
4089
10.4
Mys Shmidta
WIND SPEED-DIURNAL VARIATION
4335
10.2
Ostrov Kolychino
WIND SPEED-DIURNAL VARIATION
2461
12.3
Mys Uelen
WIND SPEED-DIURNAL VARIATION
4365
13.8
Tin City
WIND SPEED-DIURNAL VARIATION
6662
12.8
Kotzebue
WIND SPEED-DIURNAL VARIATION
9577
11.4
Cape Lisburne
WIND SPEED-DIURNAL VARIATION
6727
10.7
Point Lay
WIND SPEED-DIURNAL VARIATION
3229
Barrow
WIND SPEED-DIURNAL VARIATION
8814
10.9
Lonely
WIND SPEED-DIURNAL VARIATION
3282
9.6
Oliktok
WIND SPEED-DIURNAL VARIATION
3241
10.6
Barter
WIND SPEED-DIURNAL VARIATION
8605
Tuktoyaktuk
WIND SPEED-DIURNAL VARIATION
1546
9.8
Cape Parry
WIND SPEED-DIURNAL VARIATION
6127
11.2
Clinton Point
WIND SPEED-DIURNAL VARIATION
1284
10.9
Holman
WIND SPEED-DIURNAL VARIATION
475
13.2
MEAN WIND SPEED (KNOTS)
GMT
LOCAL
ALL

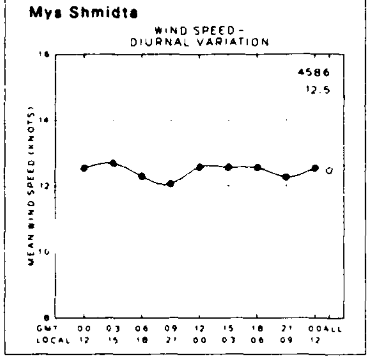


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **September**

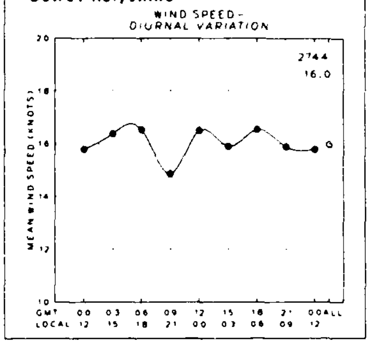
Ostrov Vrangelja



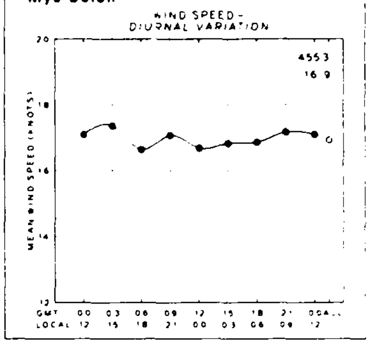
Mys Shmidta



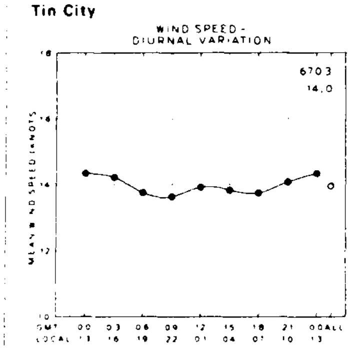
Ostrov Kolychino



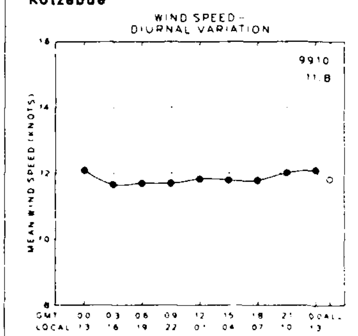
Mys Uelen



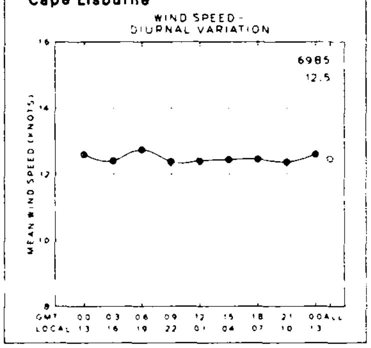
Tin City



Kotzebue



Cape Lisburne



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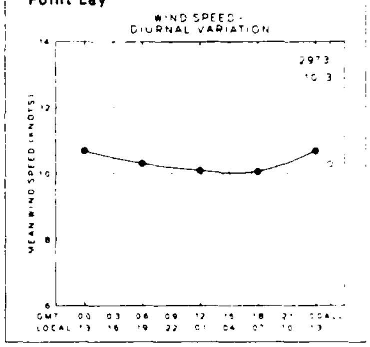
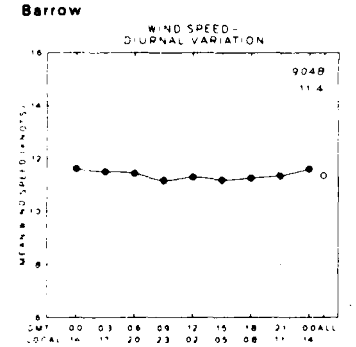
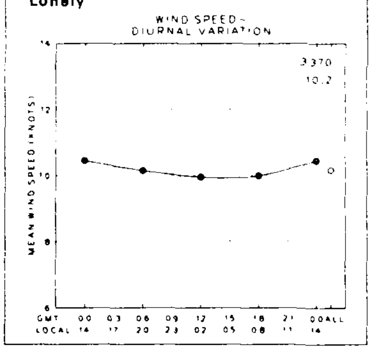


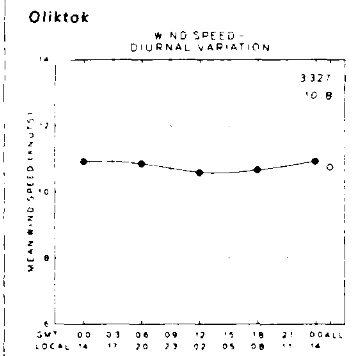
Barrow



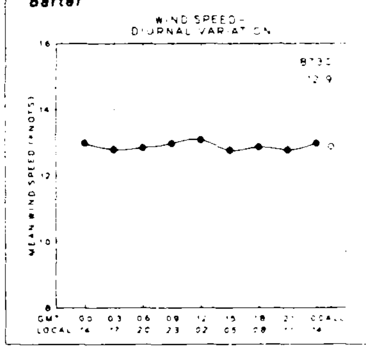
Lonely



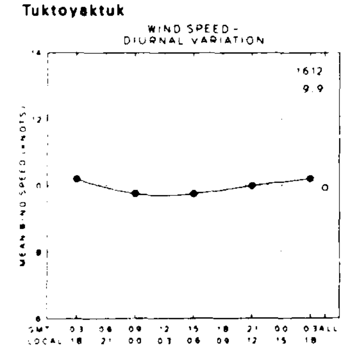
Oliktok



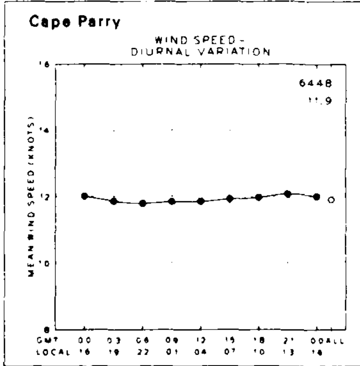
Barter



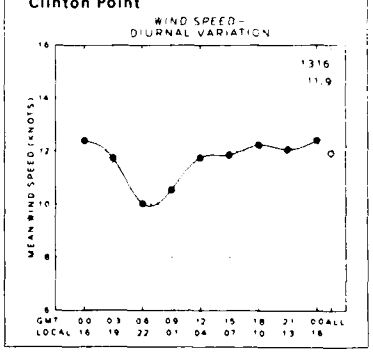
Tuktoyaktuk



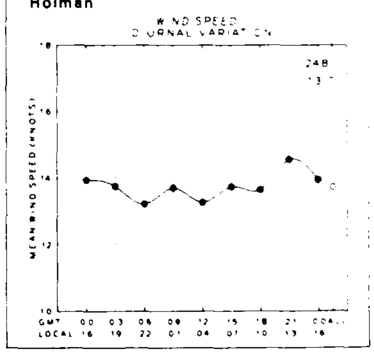
Cape Parry

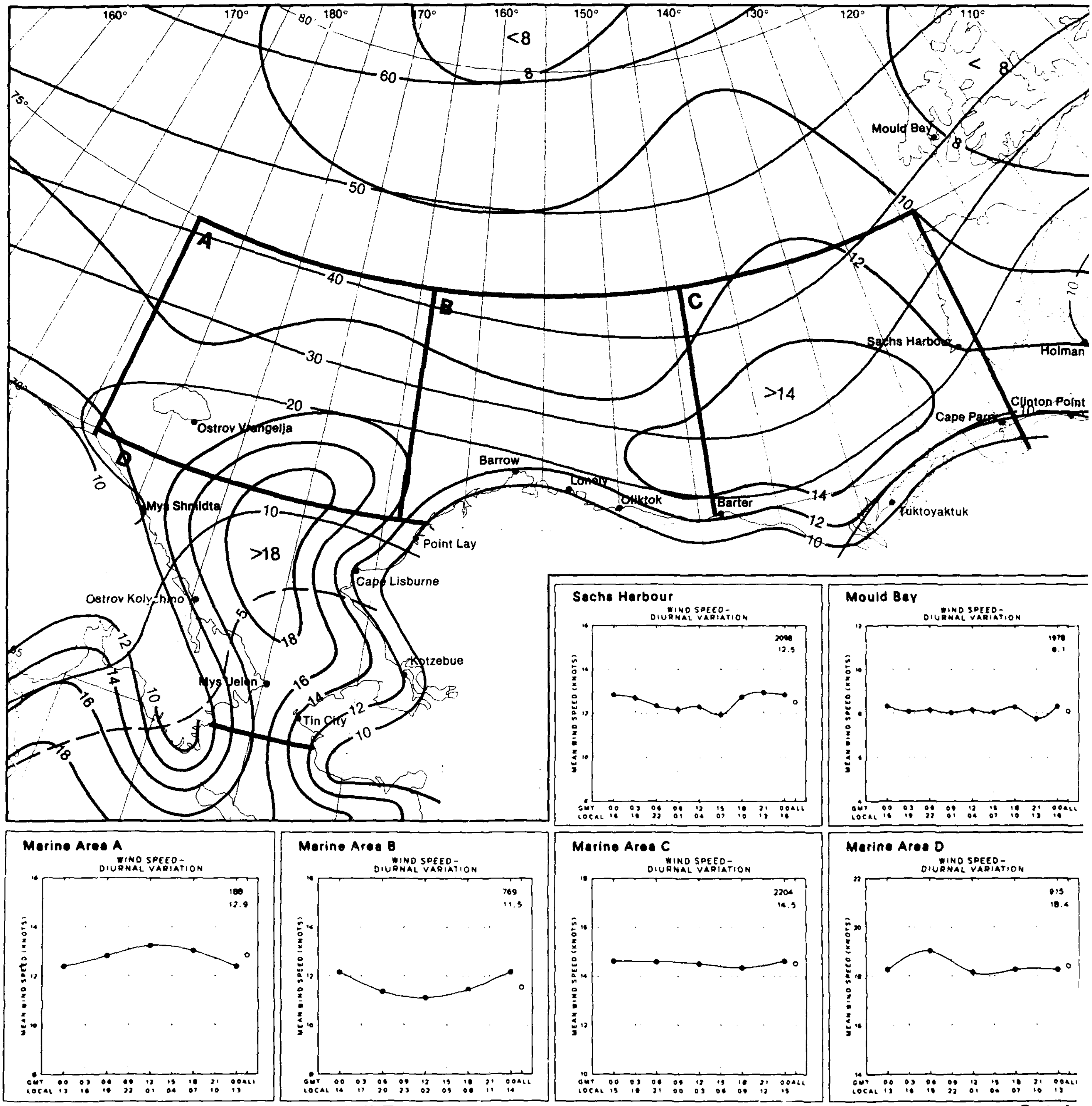


Clinton Point



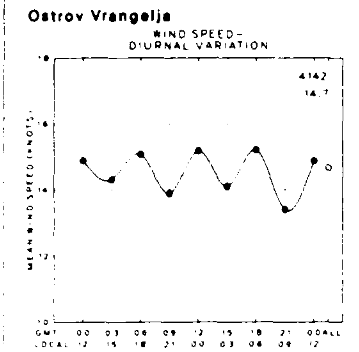
Holman



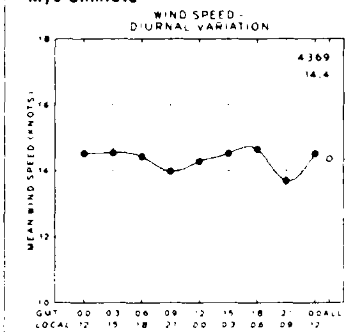


13 Scalar Mean Wind and Wind Chill Temperature ≦ -30°C **Octob**

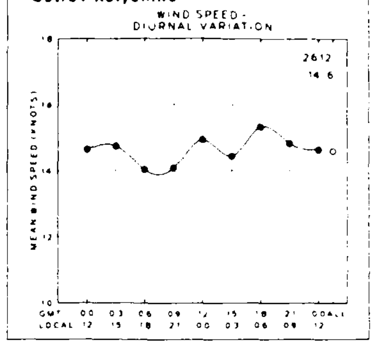
Ostrov Vrangelja



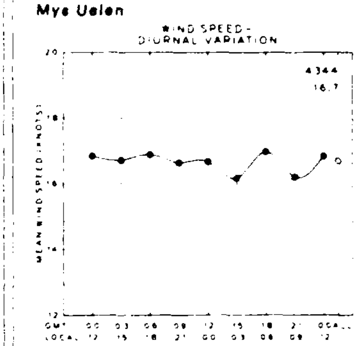
Mys Shmidta



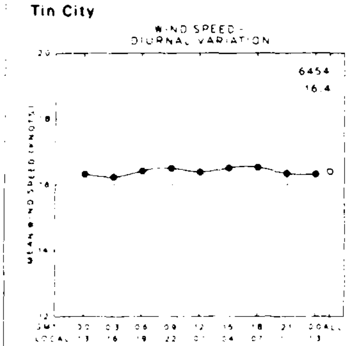
Ostrov Kolychino



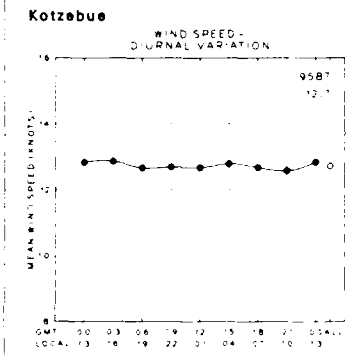
Mys Uelen



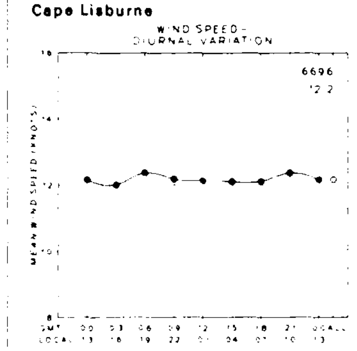
Tin City



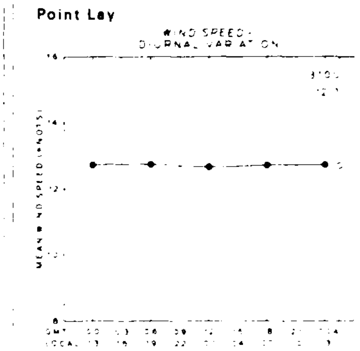
Kotzebue



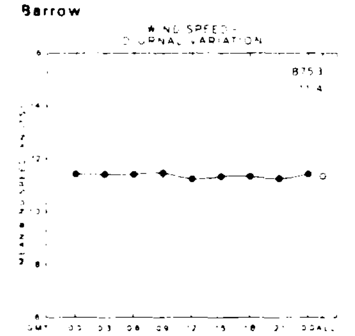
Cape Lisburne



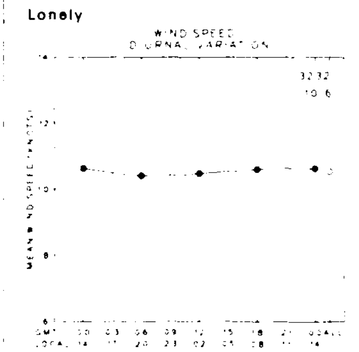
Point Lay



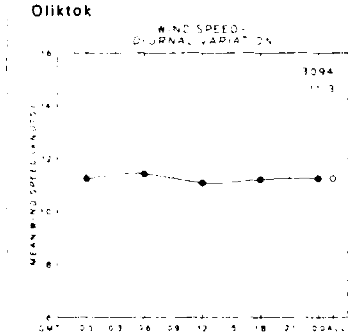
Barrow



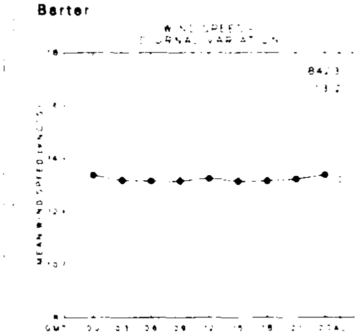
Lonely



Oliktok



Barter



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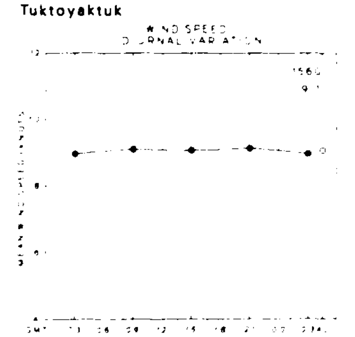
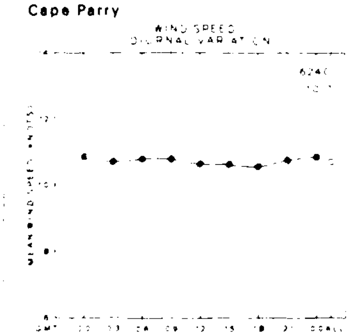
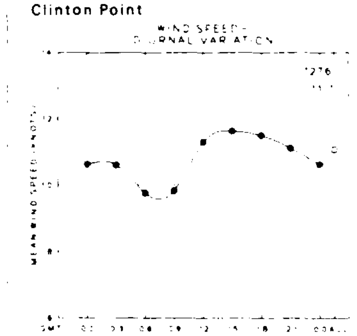


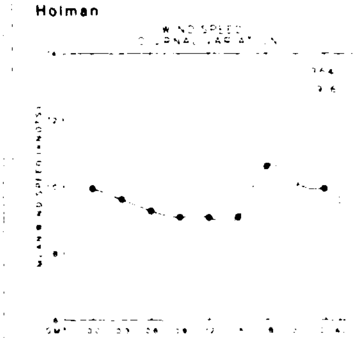
Cape Parry

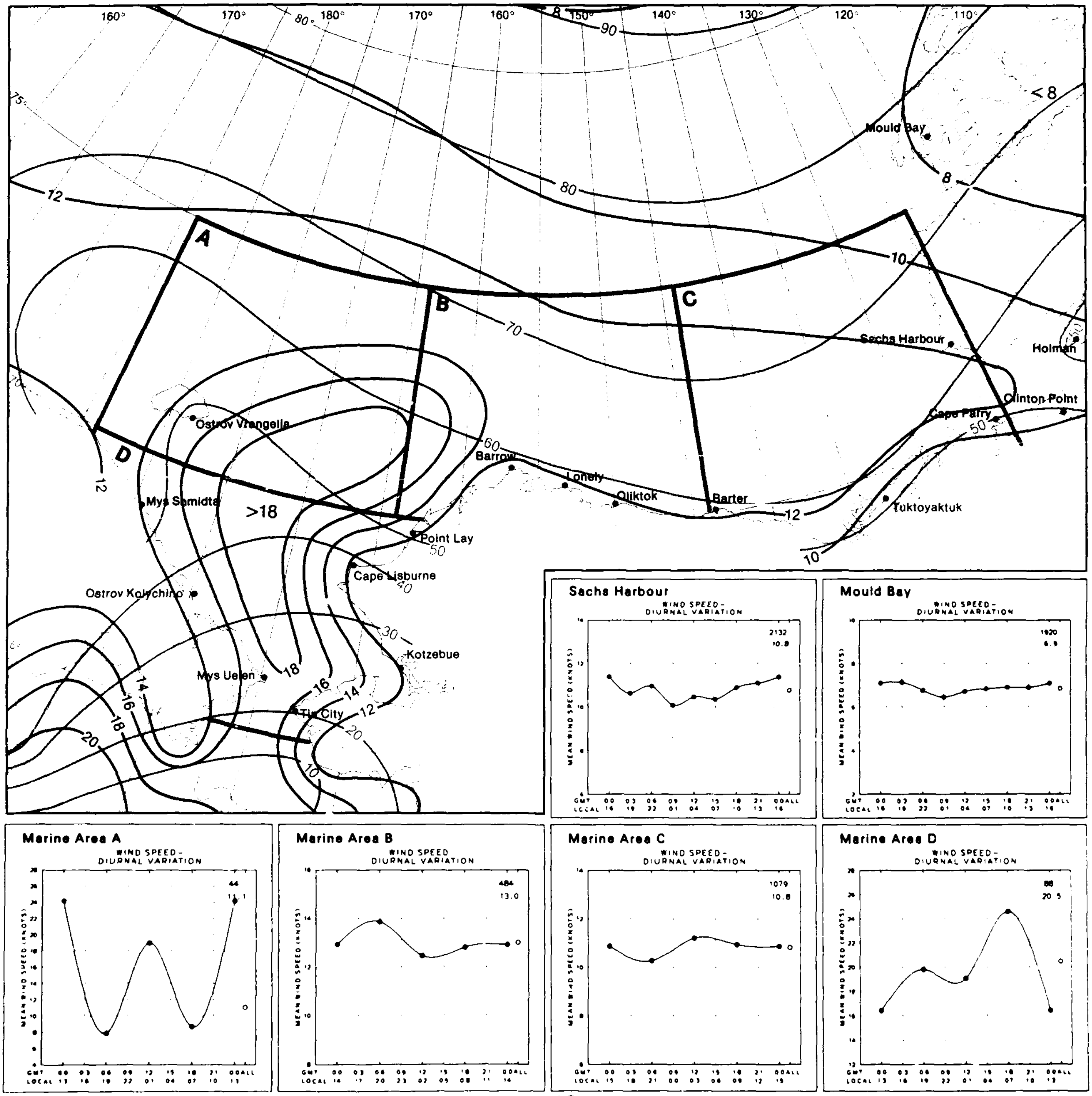


Clinton Point



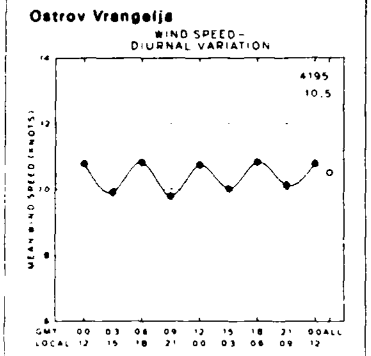
Holman



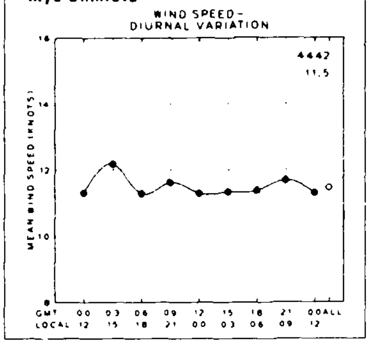


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **November**

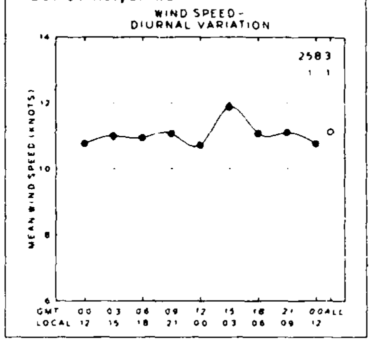
Ostrov Vrangelja



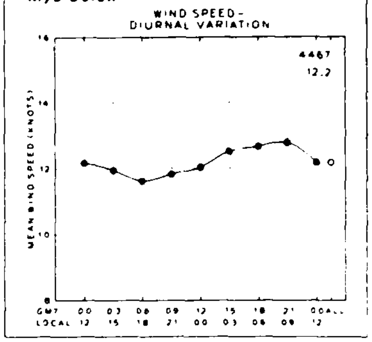
Mys Shmidta



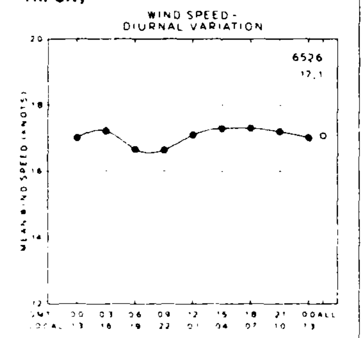
Ostrov Kolychino



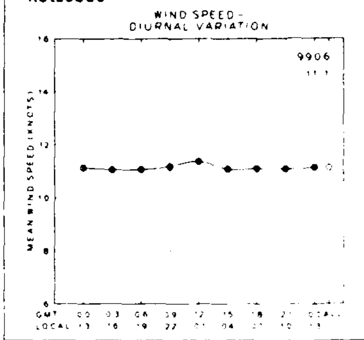
Mys Uelen



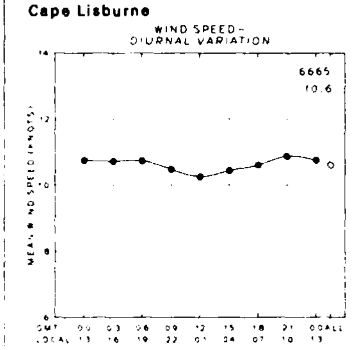
Tin City



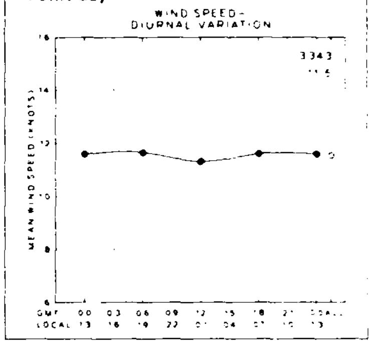
Kotzebue



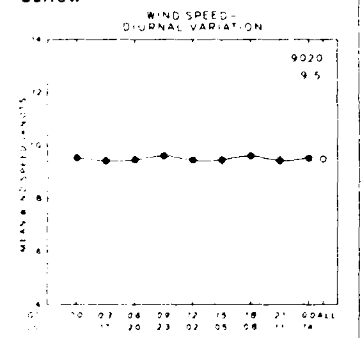
Cape Lisburne



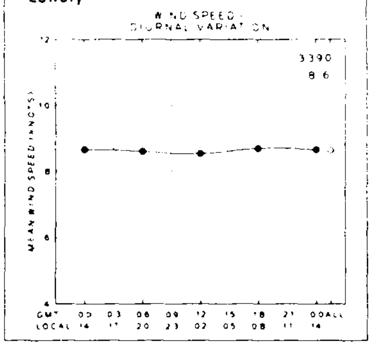
Point Lay



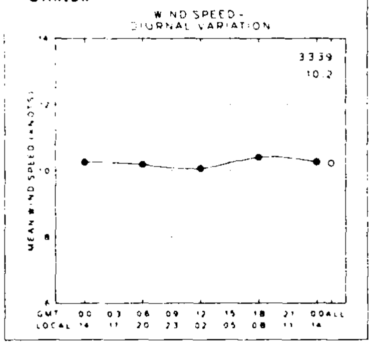
Barrow



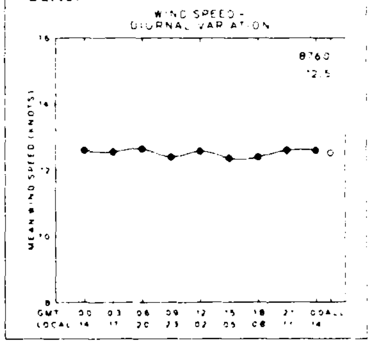
Lonely



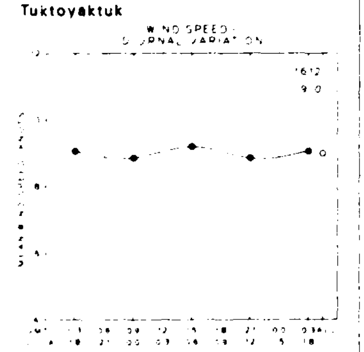
Oliktok



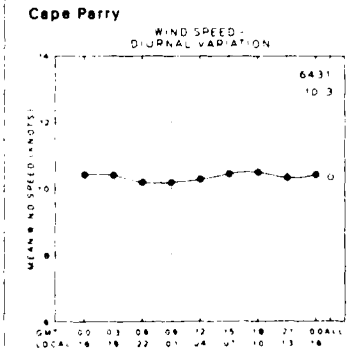
Barter



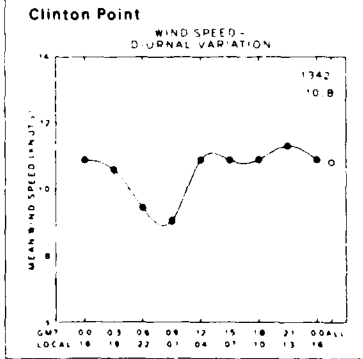
Tuktoyaktuk



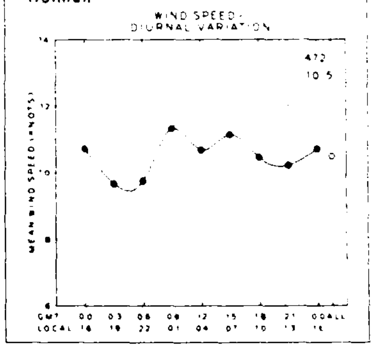
Cape Parry

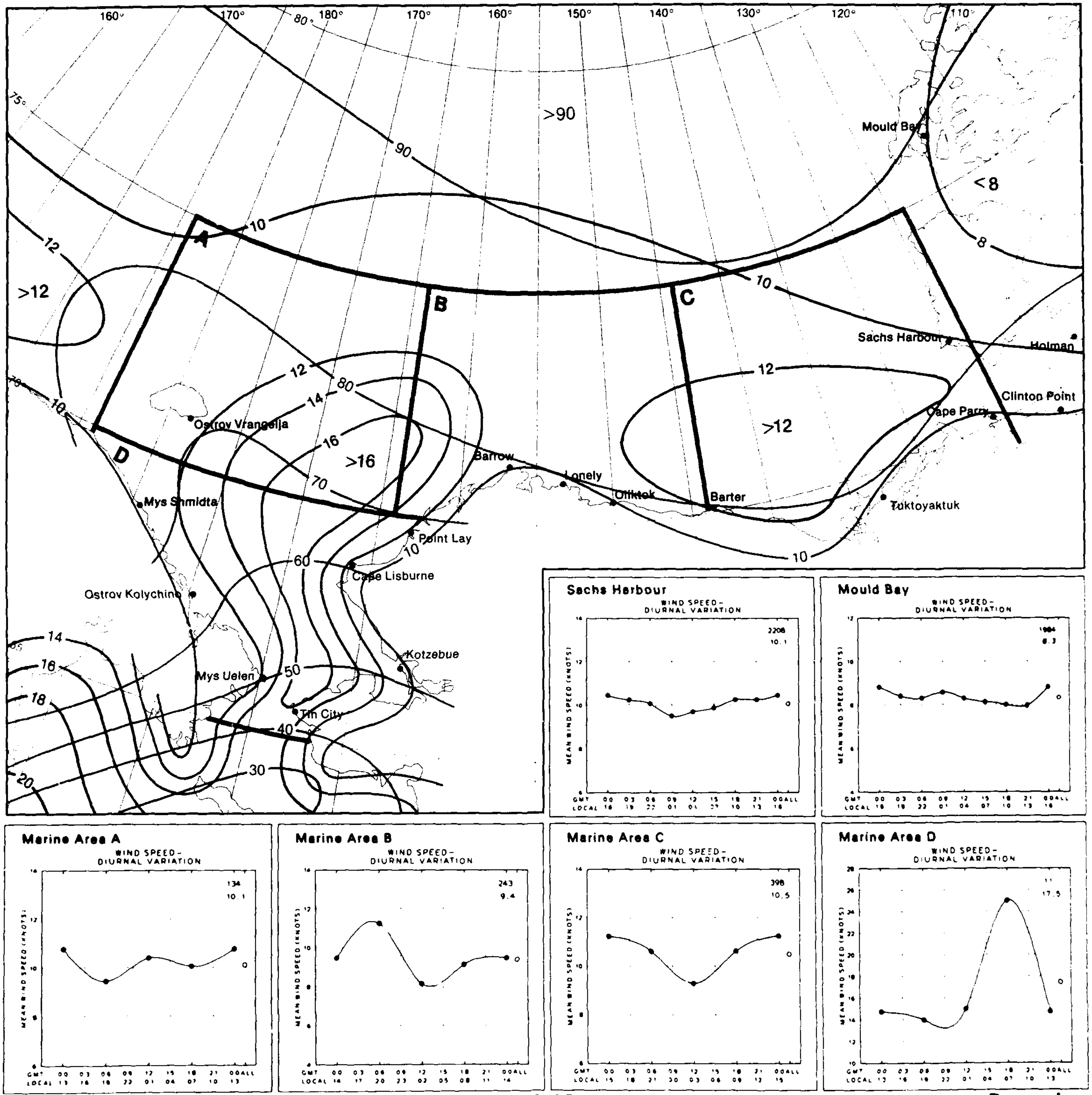


Clinton Point



Holman





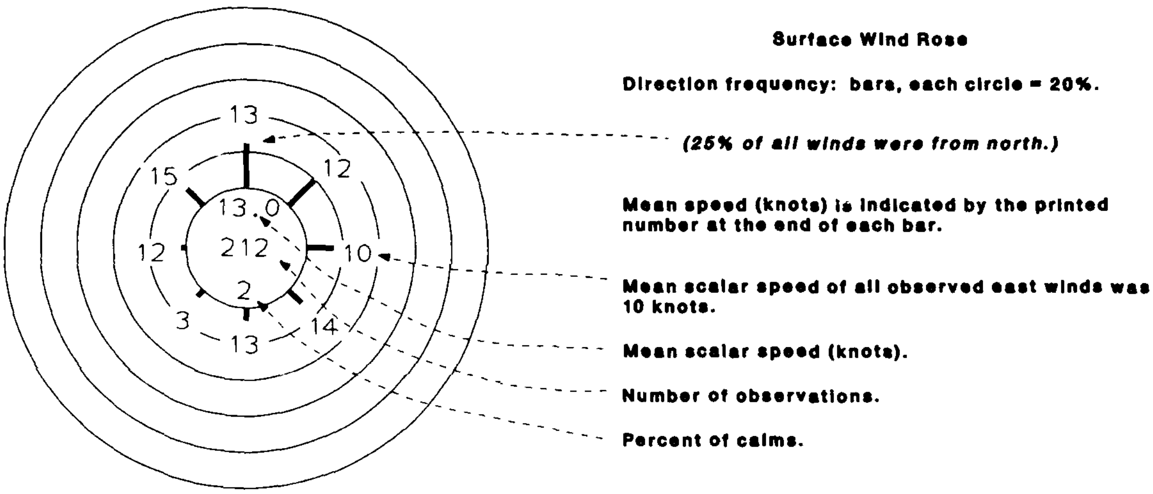
13 Scalar Mean Wind and Wind Chill Temperature ≤ -30°C

December

Map 14. Wind speed and direction

ROSE – Percent frequency of wind observations by direction (8–points).

Albers Equal–Area Conic Projection



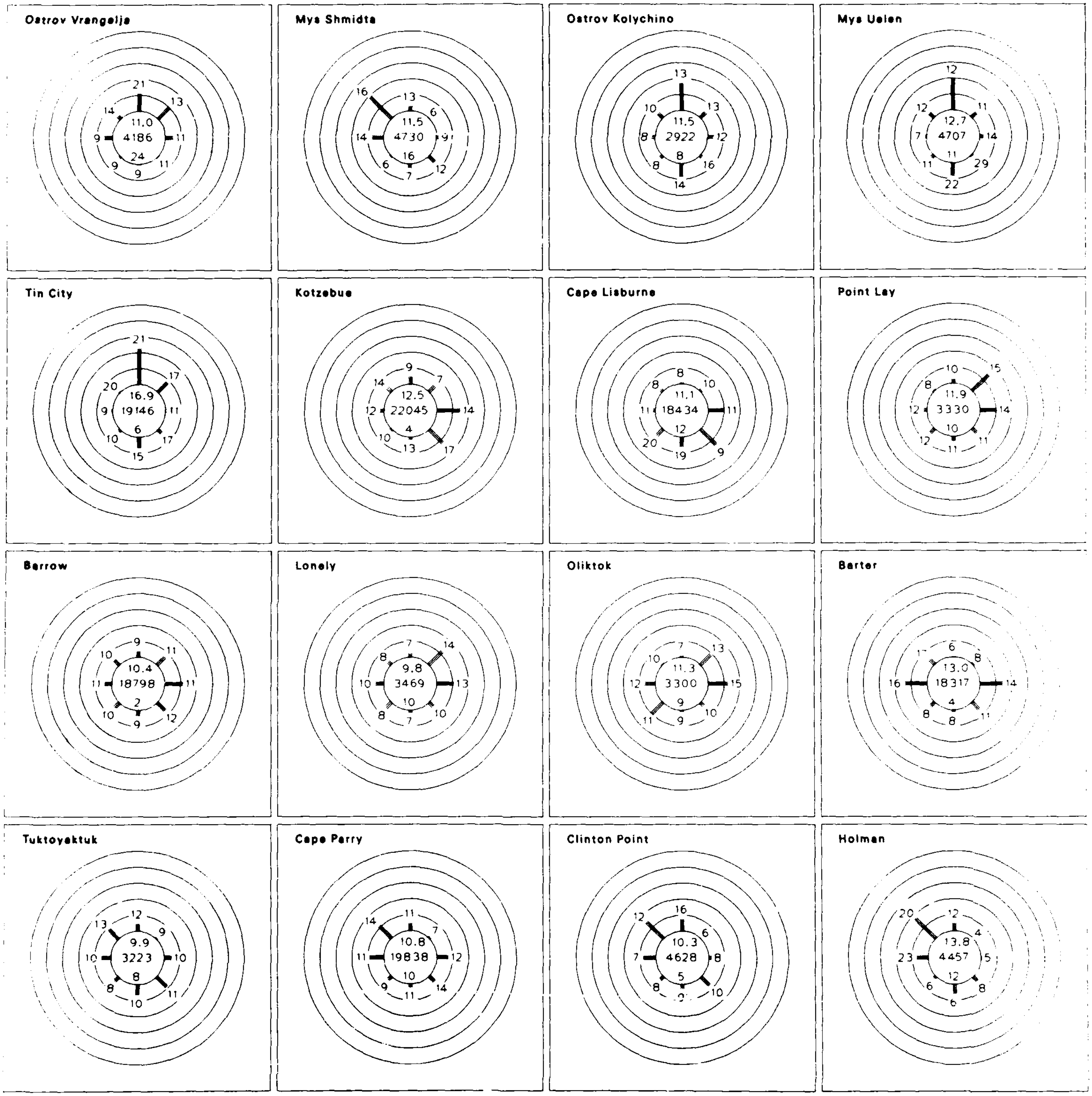
Wind is measured in terms of velocity, a vector that gives both wind speed and direction. ***True wind*** is the wind that is experienced by an observer standing still. When the ship is moving, an observer experiences what is termed an ***apparent wind***. The speed and course of the ship must be eliminated from the apparent wind to obtain the true wind, which is needed for meteorological purposes. Wind estimated from the appearance of the sea surface is a true wind, while wind determined by the appearance of the ship's rigging or by a shipboard anemometer is an apparent wind. True wind direction may be estimated by observing the direction from which ripples, small waves, and sea spray are coming, since they run with the wind. The direction from which the waves are coming is most easily found by sighting along the wave crests and then turning 90° to face the advancing waves. The observer is then facing the direction from which the waves are coming. The direction is determined to the nearest 10° with respect to true north. The true wind speed is the average speed of the wind blowing near the sea surface. Information in the following table is used to estimate the true wind speed based upon the condition of the sea surface. Refer to the text in Set 11 for additional descriptive information on winds.

WIND SPEED IN KNOTS (WMO Code, 1982)

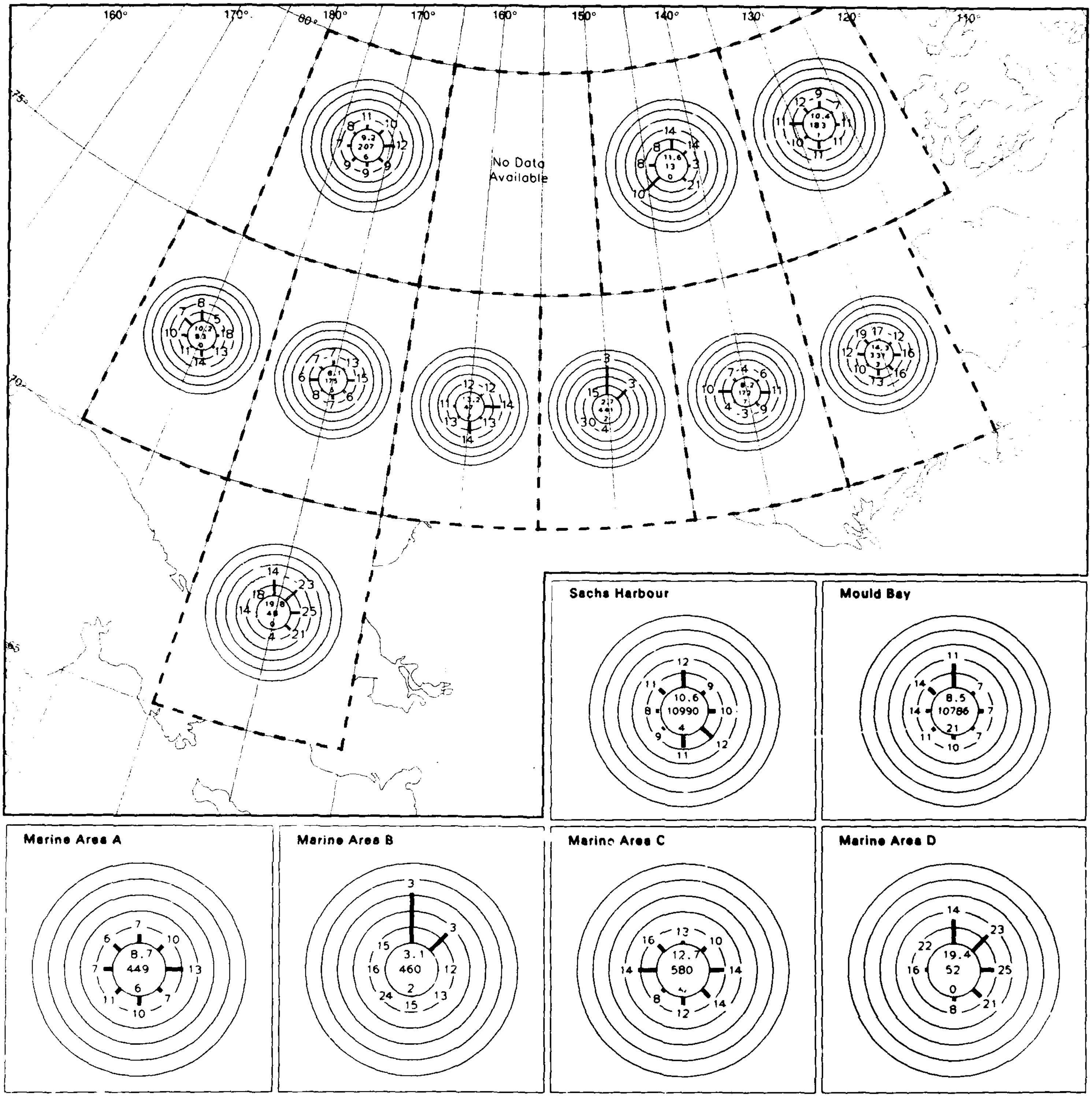
This table is based on sea conditions over deep water with a fully developed sea. There will be frequent cases where the sea will not be fully developed bacause the wind has not blown long enough over a sufficient distance (fetch). Other factors such as currents and water depth will also affect the lock of the sea.

Code figs. (Knots)	Beaufort	Description	Sea criterion when sea fully developed	Probable ht. of waves in m (ft) Average		Maximum	
00	0	*Calm*	*Sea like a mirror*	-			-
01-03	1	Light air	Ripples with the appearance of scales are formed, but without foam crests	0.1	(¼)	0.1	(¼)
04-06	2	Light breeze	Small wavelets, still short but more pronounced, crests have a glassy appearance and do not break	0.2	(½)	0.3	(1)
07-10	3	Gentle breeze	Large wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses	0.6	(2)	1	(3)
11-16	4	Moderate breeze	Small waves, becoming longer; fairly frequent white horses	1	(3½)	1.5	(5)
17-21	5	Fresh breeze	Moderate waves, taking a more pronounced long form; many white horses are formed (chance of some spray)	2	(6)	2.5	(8½)
22-27	6	Strong breeze	Large waves begin to form; white foam crests are more extensive everywhere (probably some spray)	3	(9½)	4	(13)
28-33	7	Near gale	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind	4	(13½)	5.5	(19)
34-40	8	Gale	Moderately high waves of greater length; edges of crests begin to break into the spindrift; the foam is blown in well-marked streaks along the direction of the wind	5.5	(18)	7.5	(25)
41-47	9	Strong gale	High waves; dense streaks of foam along the direction of the wind; crests of waves begin to topple, tumble and roll over; spray may affect visibility	7	(23)	10	(32)
48-55	10	Storm	Very high waves with long overhanging crests; the resulting foam, in great patches, is blown in dense white streaks along the direction of the wind; on the whole, the surface of the sea takes on a white appearance; tumbling of the sea becomes heavy and shock-like; visibility affected	9	(29)	12.5	(41)
58-63	11	Violent Storm	Exceptionally high waves (small and medium-sized *ships might be for a time lost to view behind the waves*); the sea is completely covered with long white patches of foam lying along the direction of the wind; everywhere the edges of the wave crests are blown into froth, visibility affected	11.5	(37)	16	(52)
64 and over	12	Hurricane	The air is filled with foam and spray; sea completely white with driving spray; visibility very seriously affected	14	(45)		XX

Note: For winds over 99 knots, add 50 to dd (direction) and enter the tens and units digits of the wind speed for ff; e.g. for a wind from 100° true at 125 knots, dd = 60, and ff = 25.

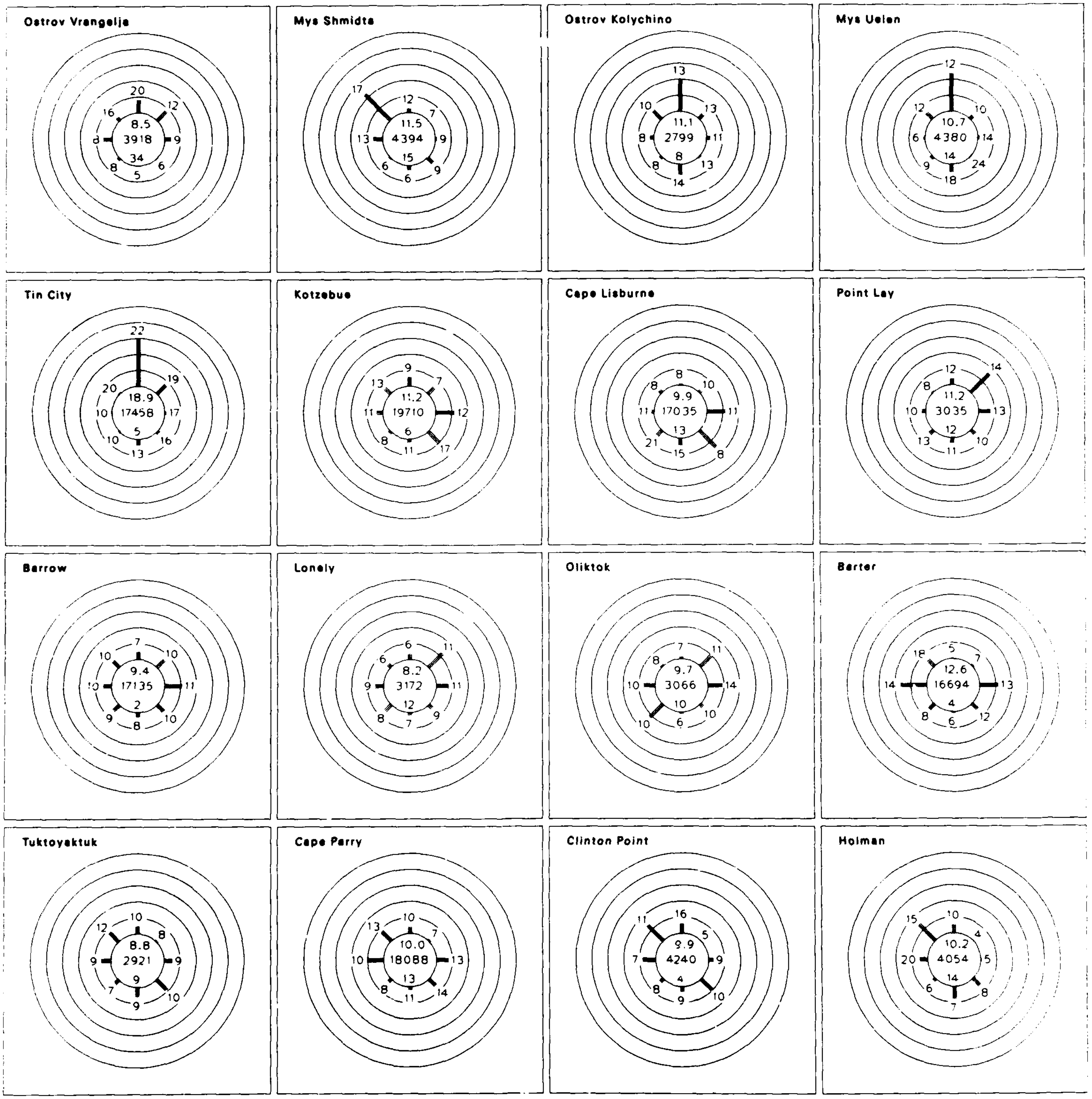


January — 14 Wind Speed and Direction

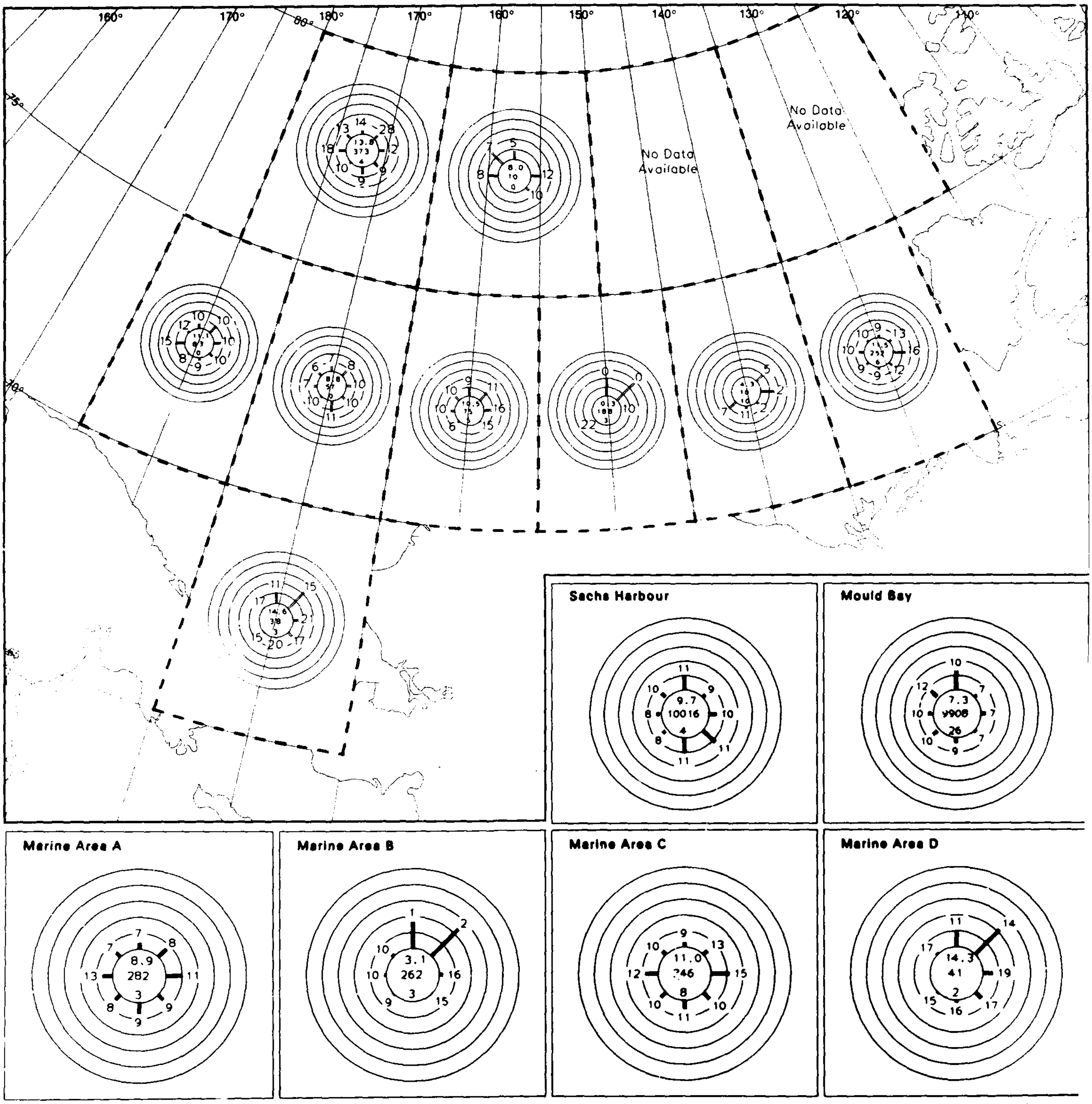


14 Wind Speed and Direction

January

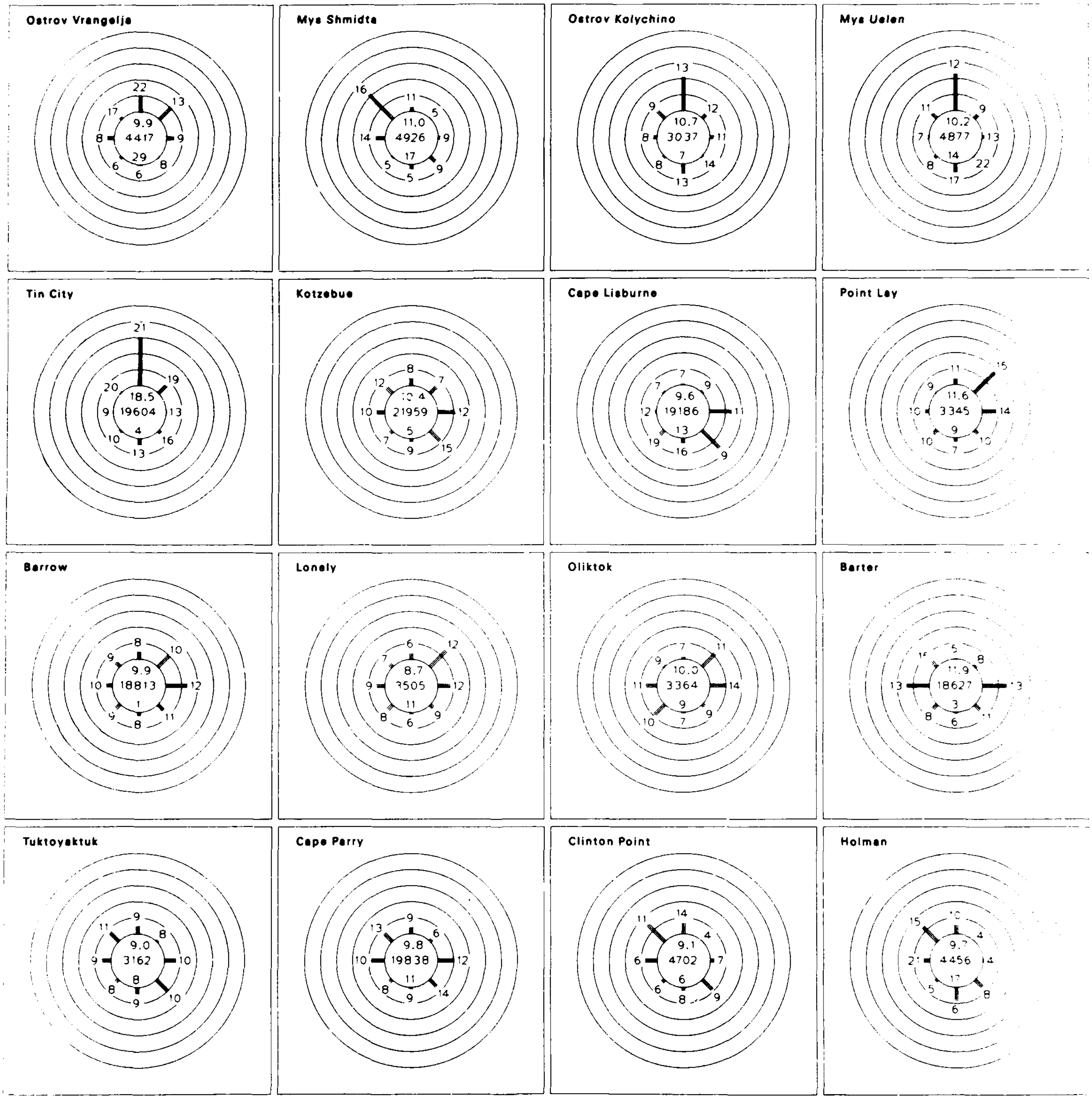


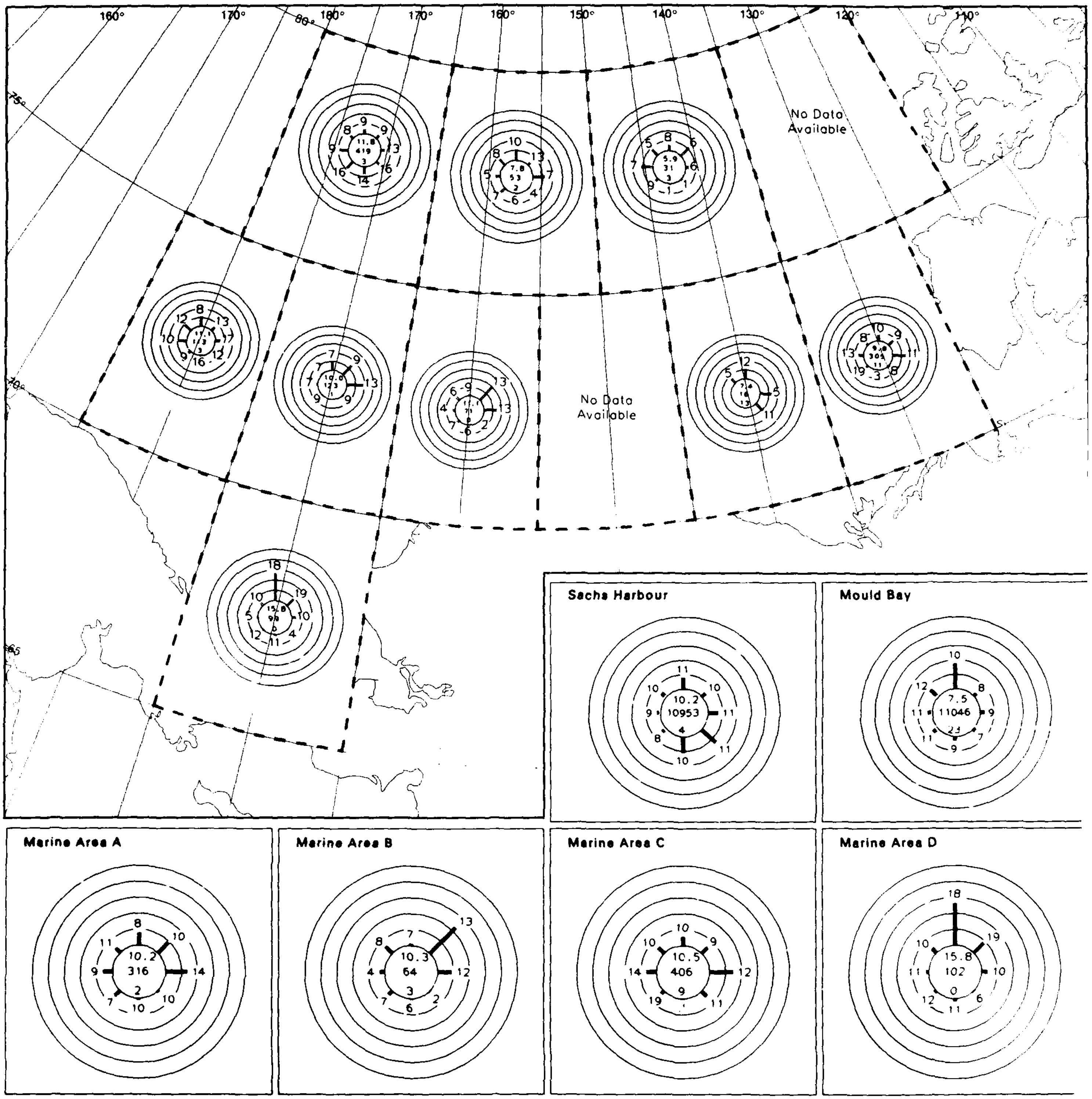
14 Wind Speed and Direction



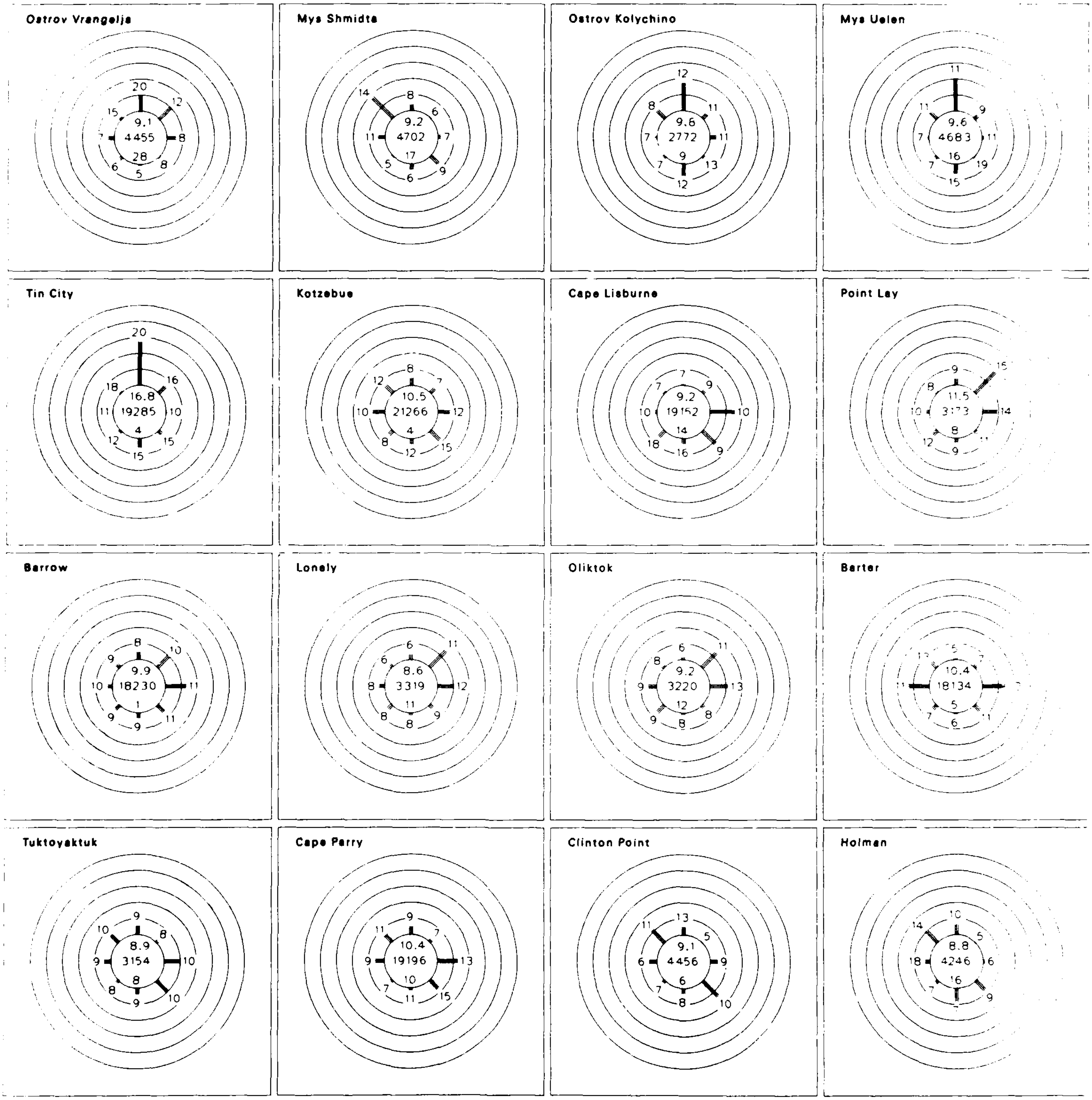
14 Wind Speed and Direction

Februar


Ostrov Vrangelja
Mys Shmidta
Ostrov Kolychino
Mys Uelen
Tin City
Kotzebue
Cape Lisburne
Point Lay
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
Holman



14 Wind Speed and Direction **Marc**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Mys Shmidta
9.2
4702
Ostrov Kolychino
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Mys Uelen
9.6
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Tin City
16.8
19285
Kotzebue
10.5
21266
Cape Lisburne
9.2
19162
Point Lay
11.5
Barrow
9.9
18230
Lonely
8.6
3319
Oliktok
9.2
3220
Barter
10.4
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Tuktoyaktuk
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Cape Parry
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Clinton Point
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Holman
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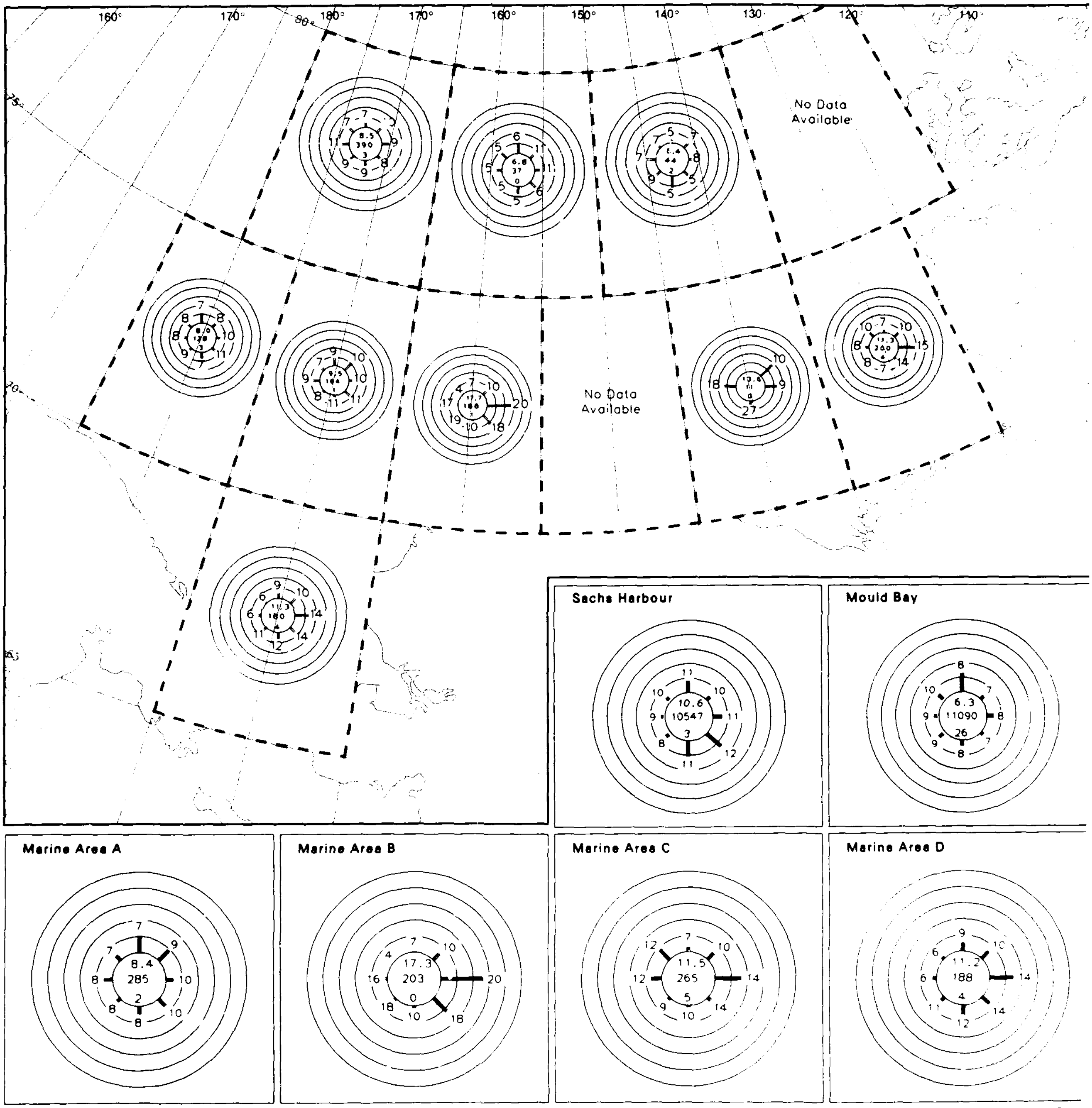

14 Wind Speed and Direction

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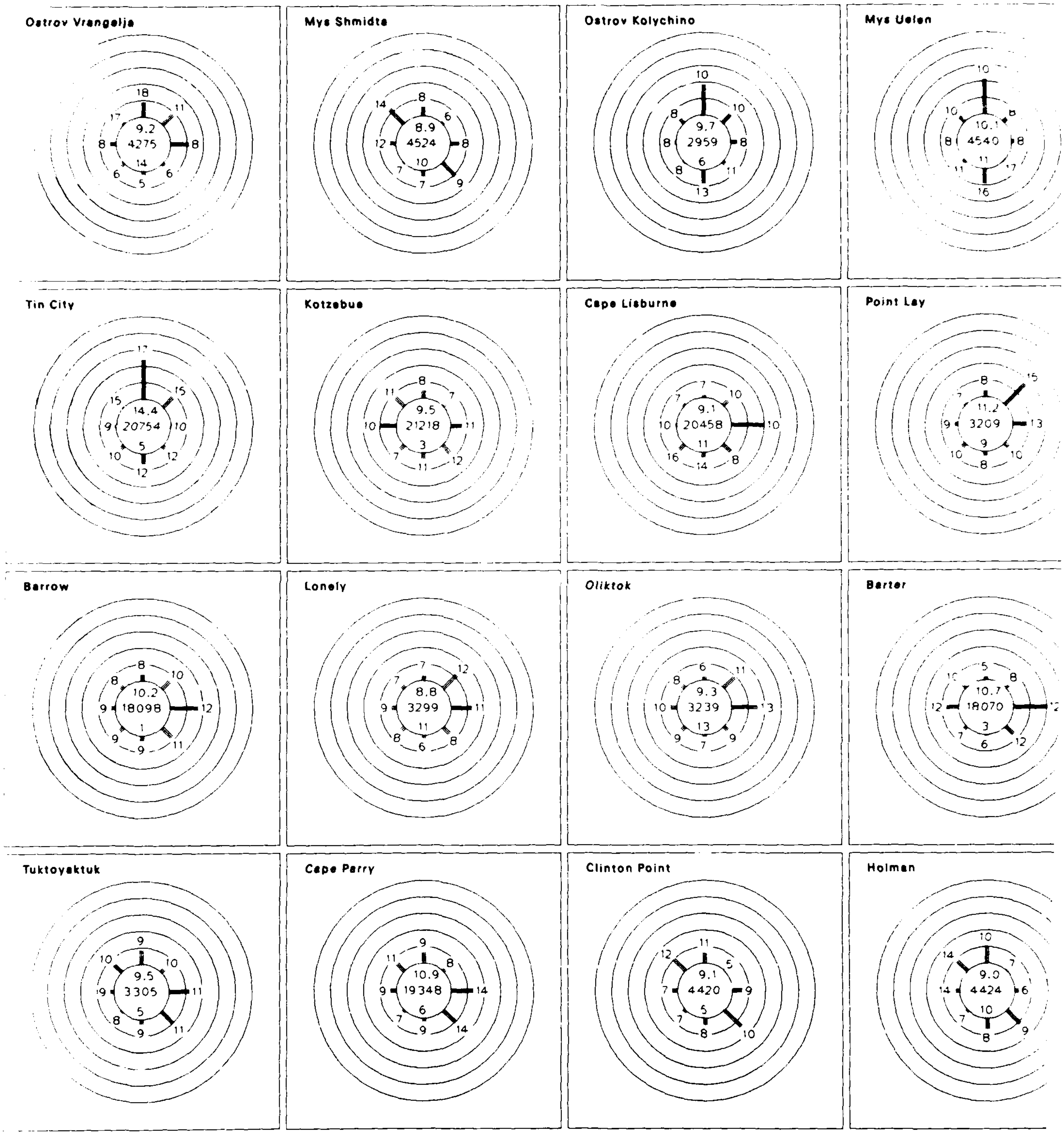
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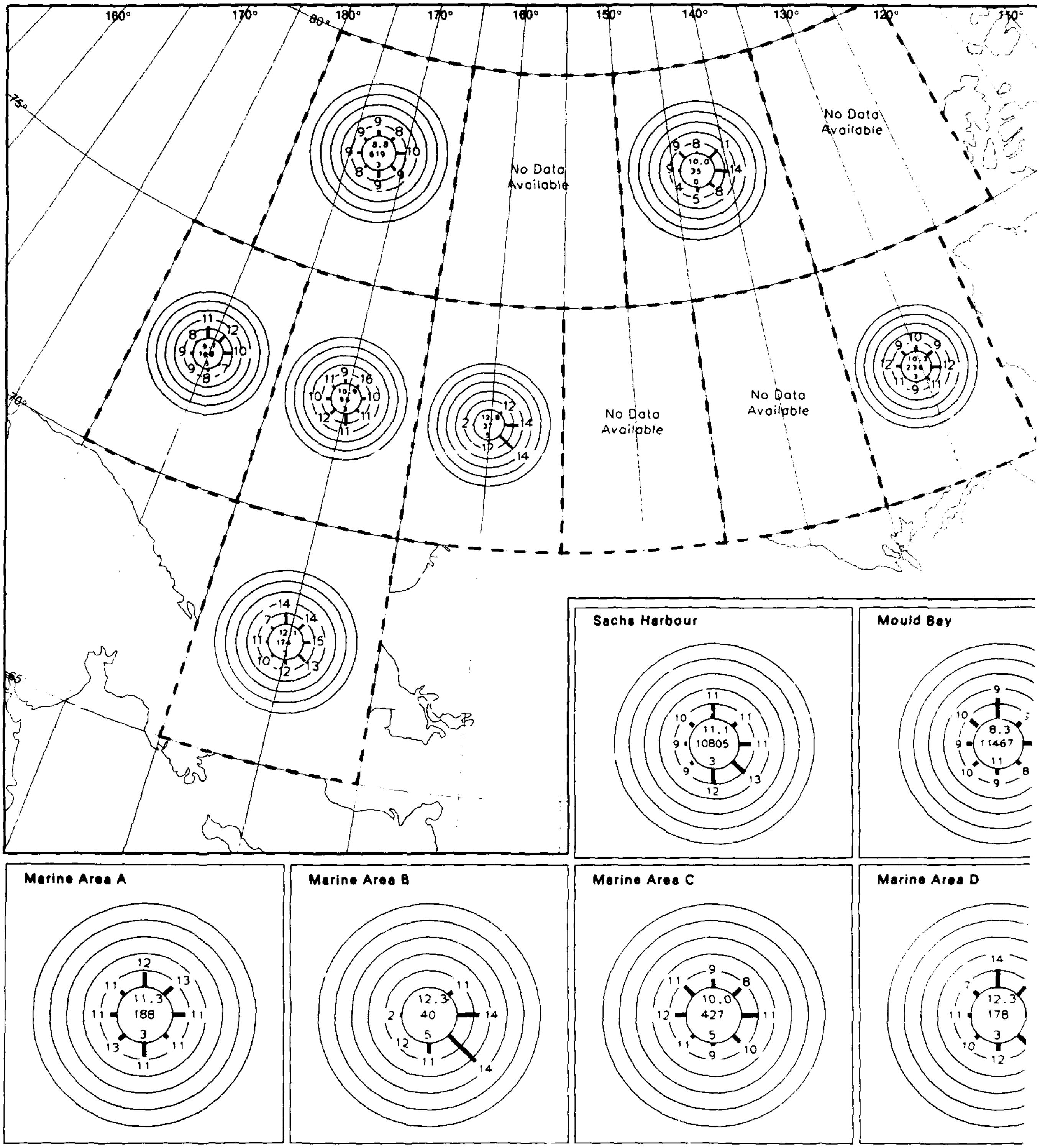
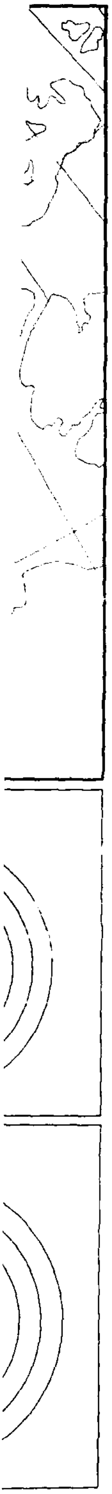


14 Wind Speed and Direction



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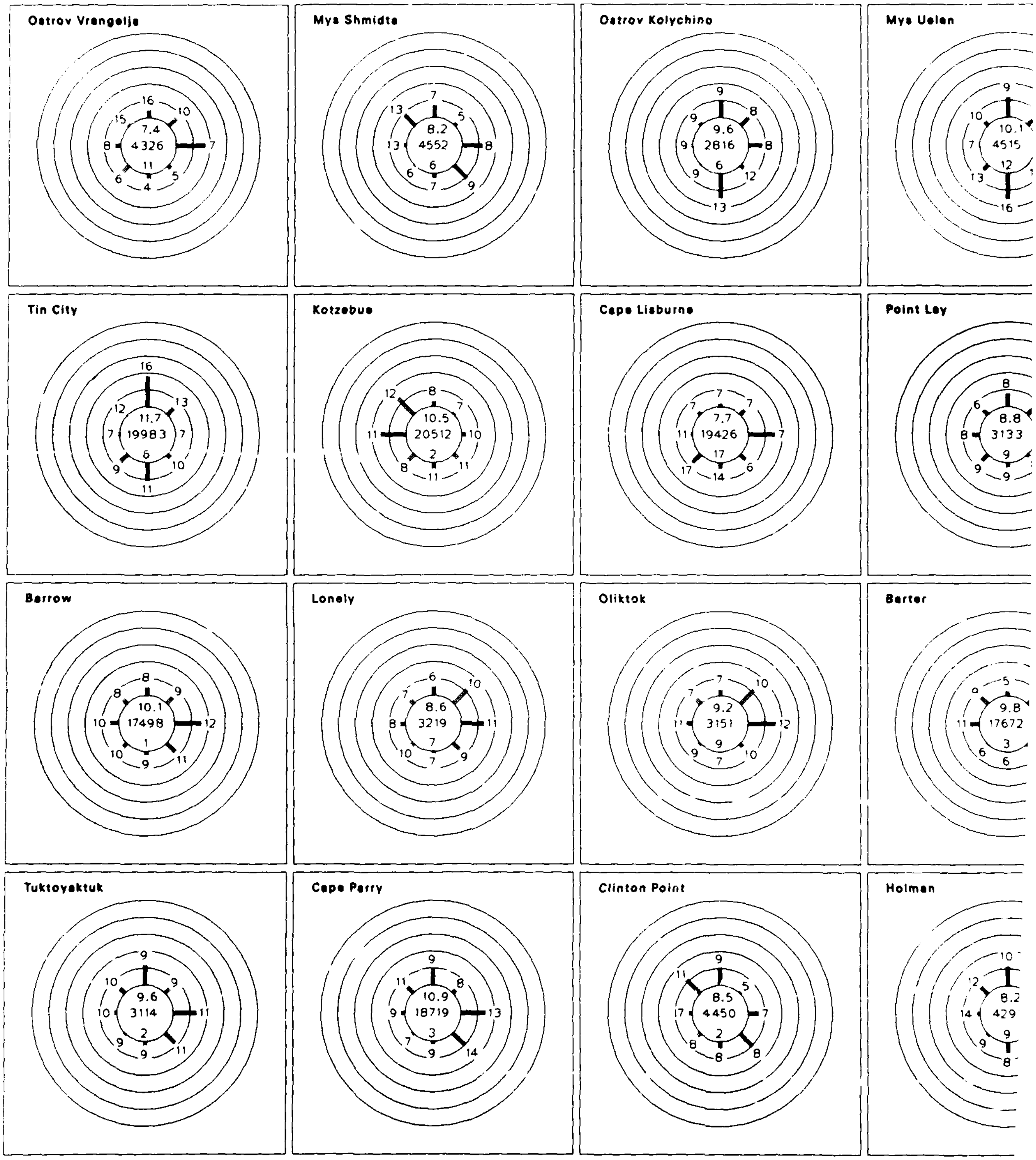

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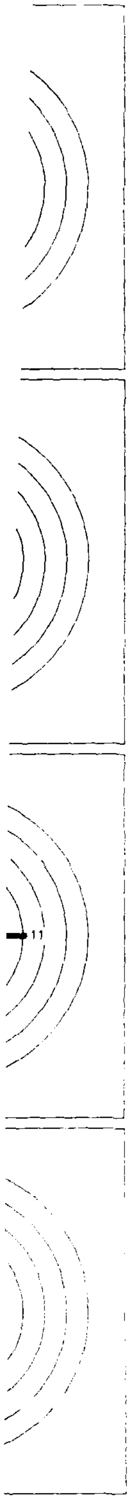
14 Wind Speed



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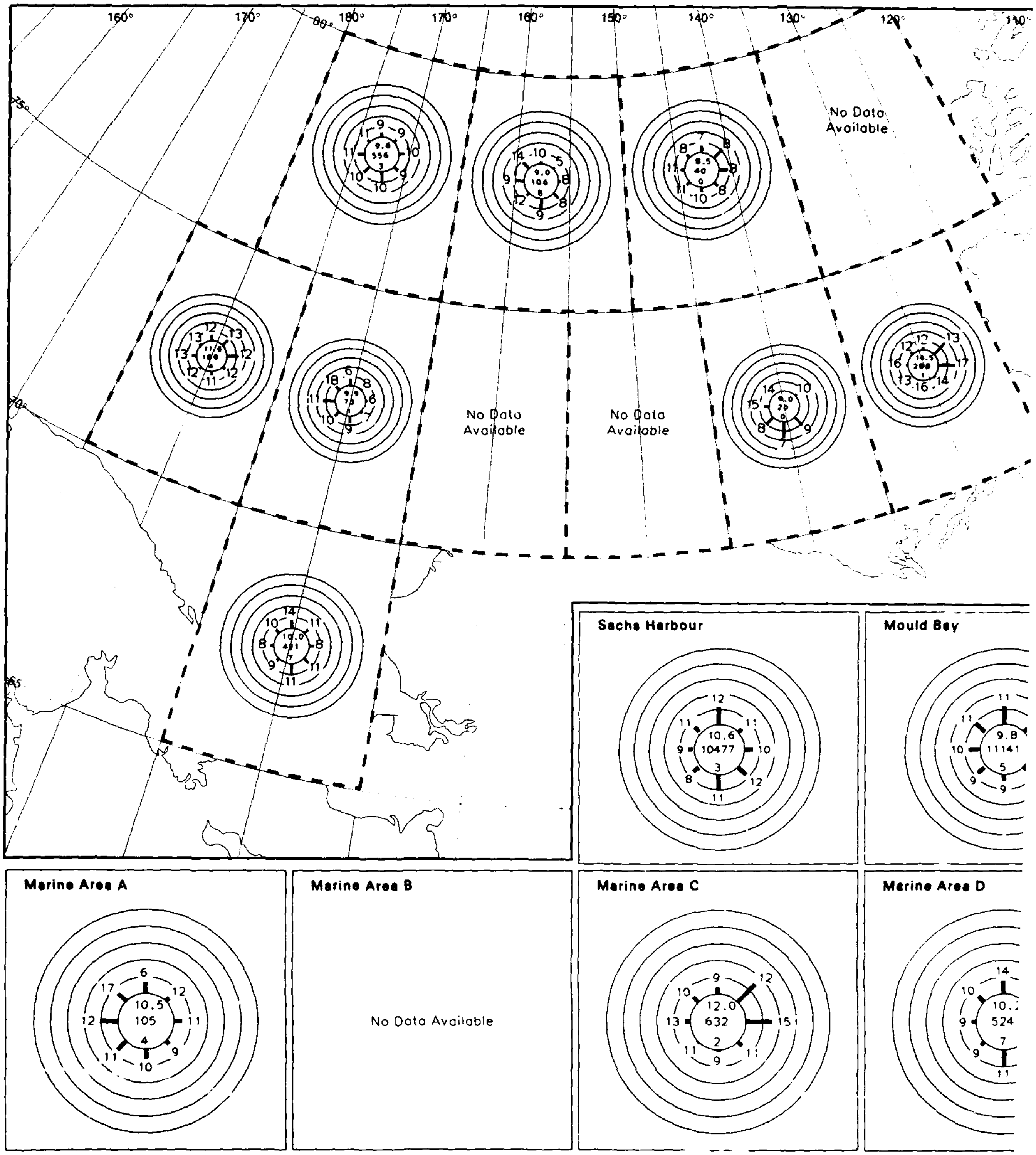
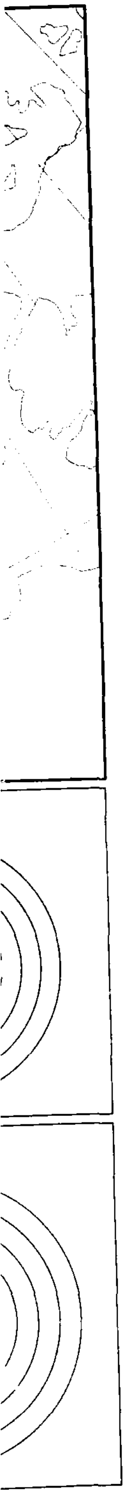


14 Wind Speed and Direction



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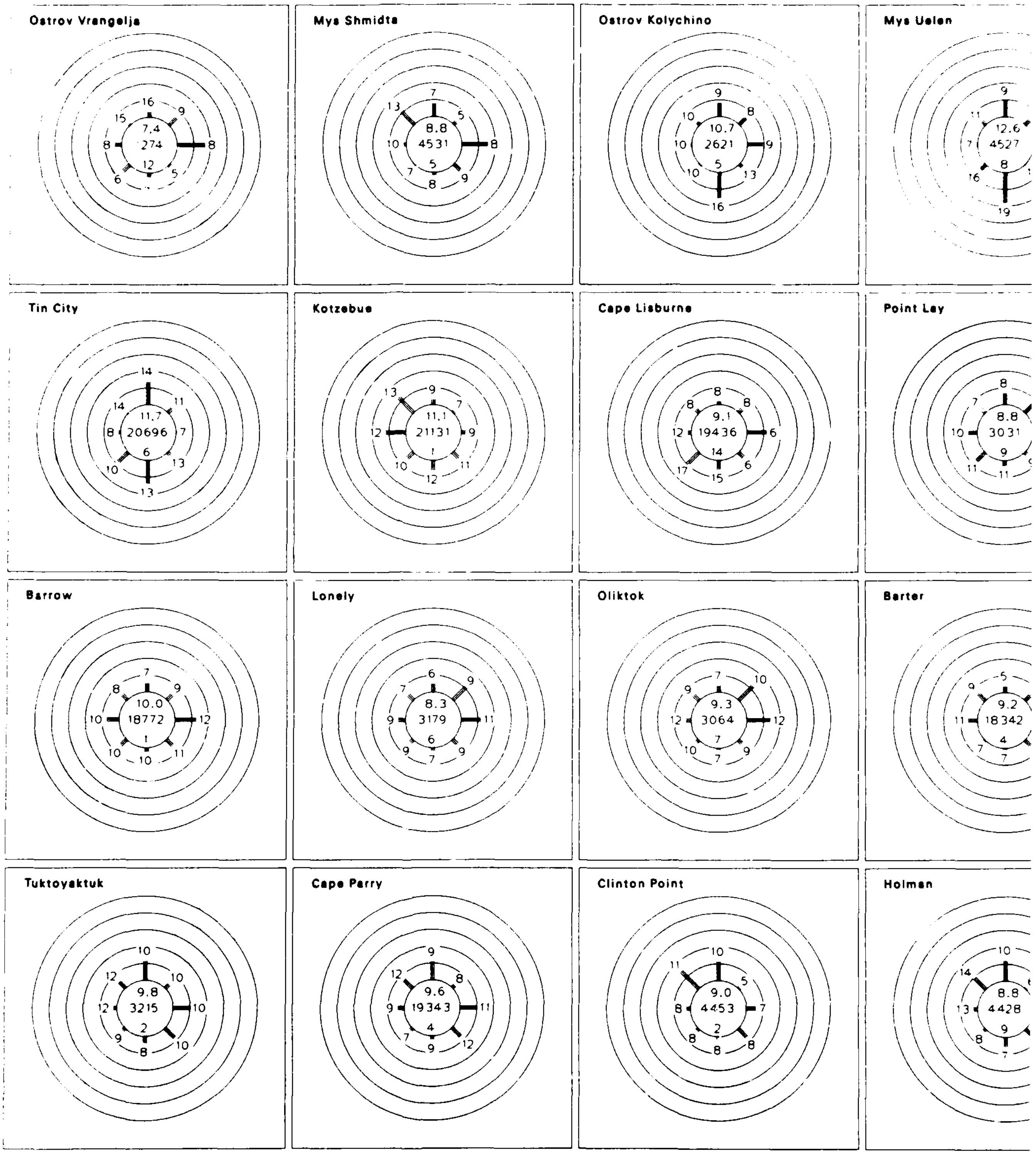
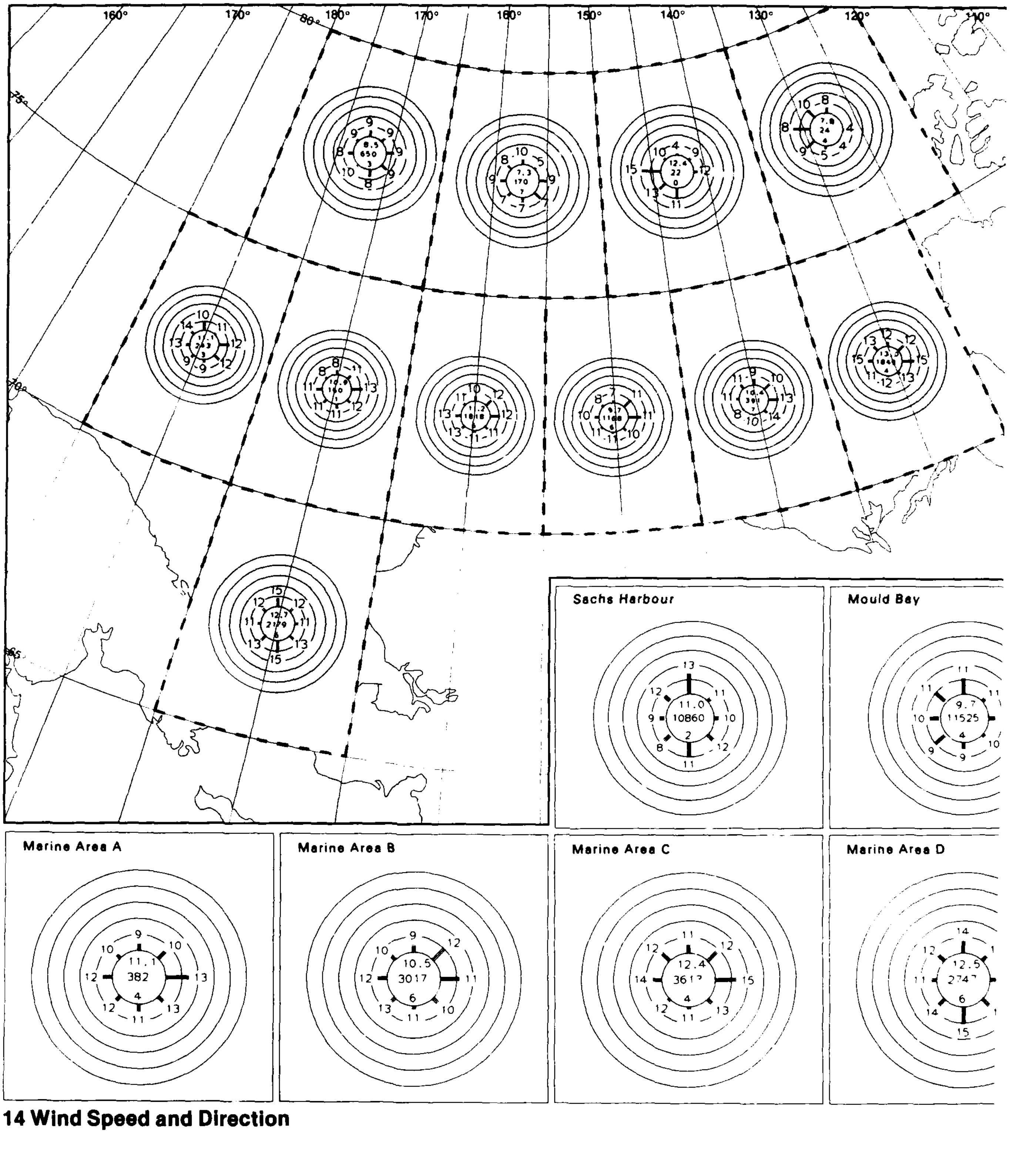


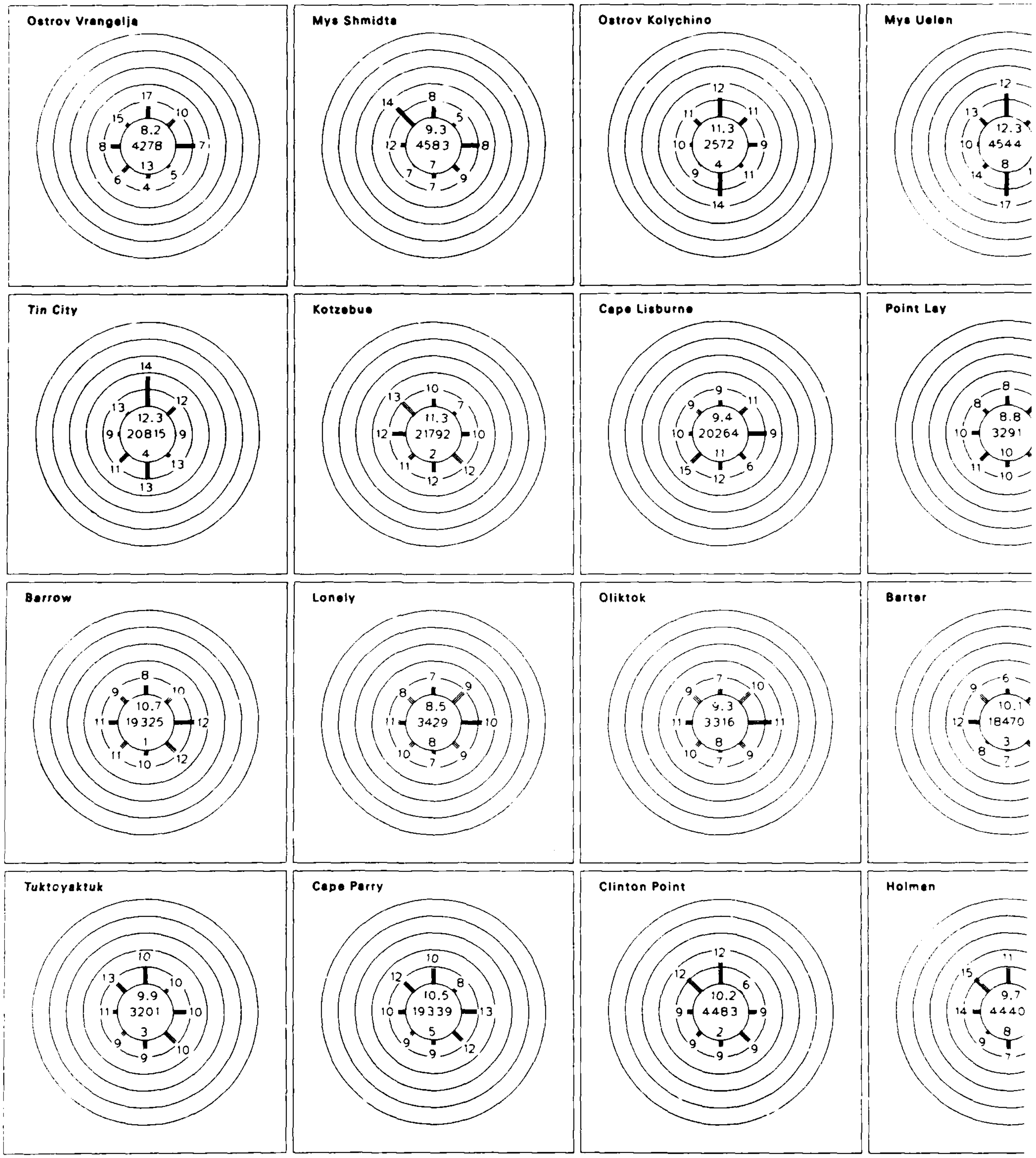
July

14 Wind Speed ar



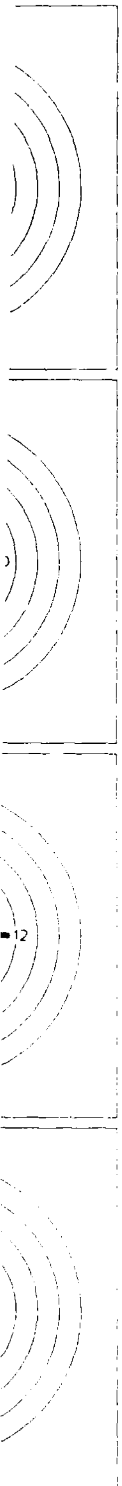
14 Wind Speed and Direction

July



August

14 Wind Speed a



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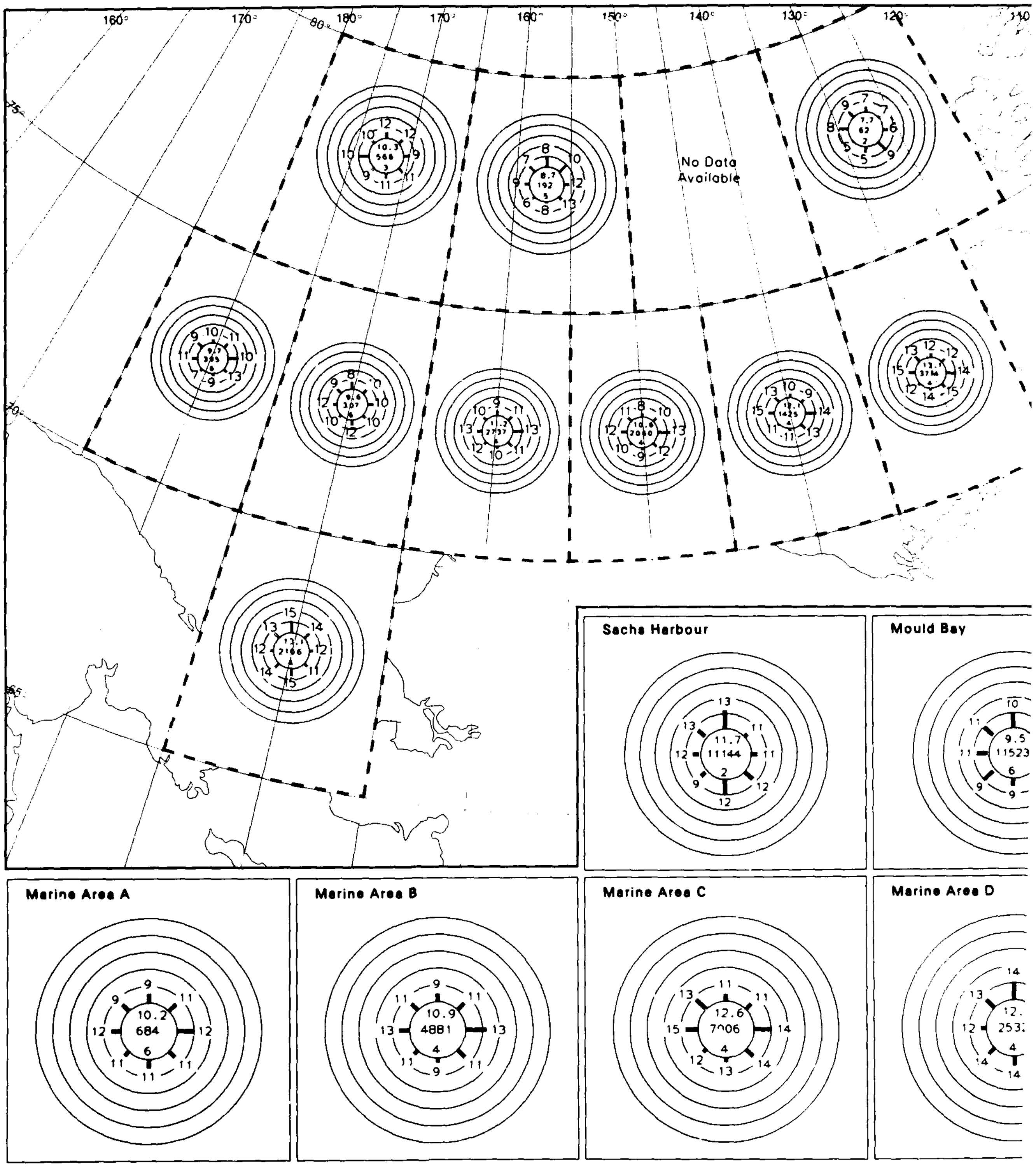
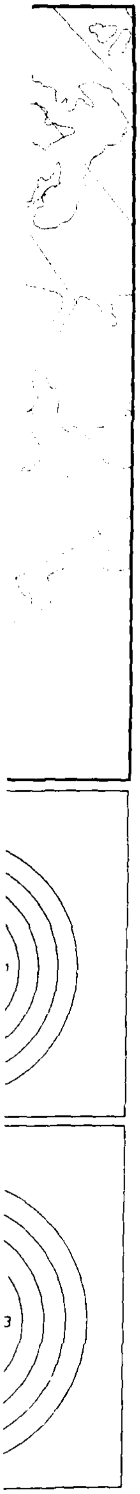


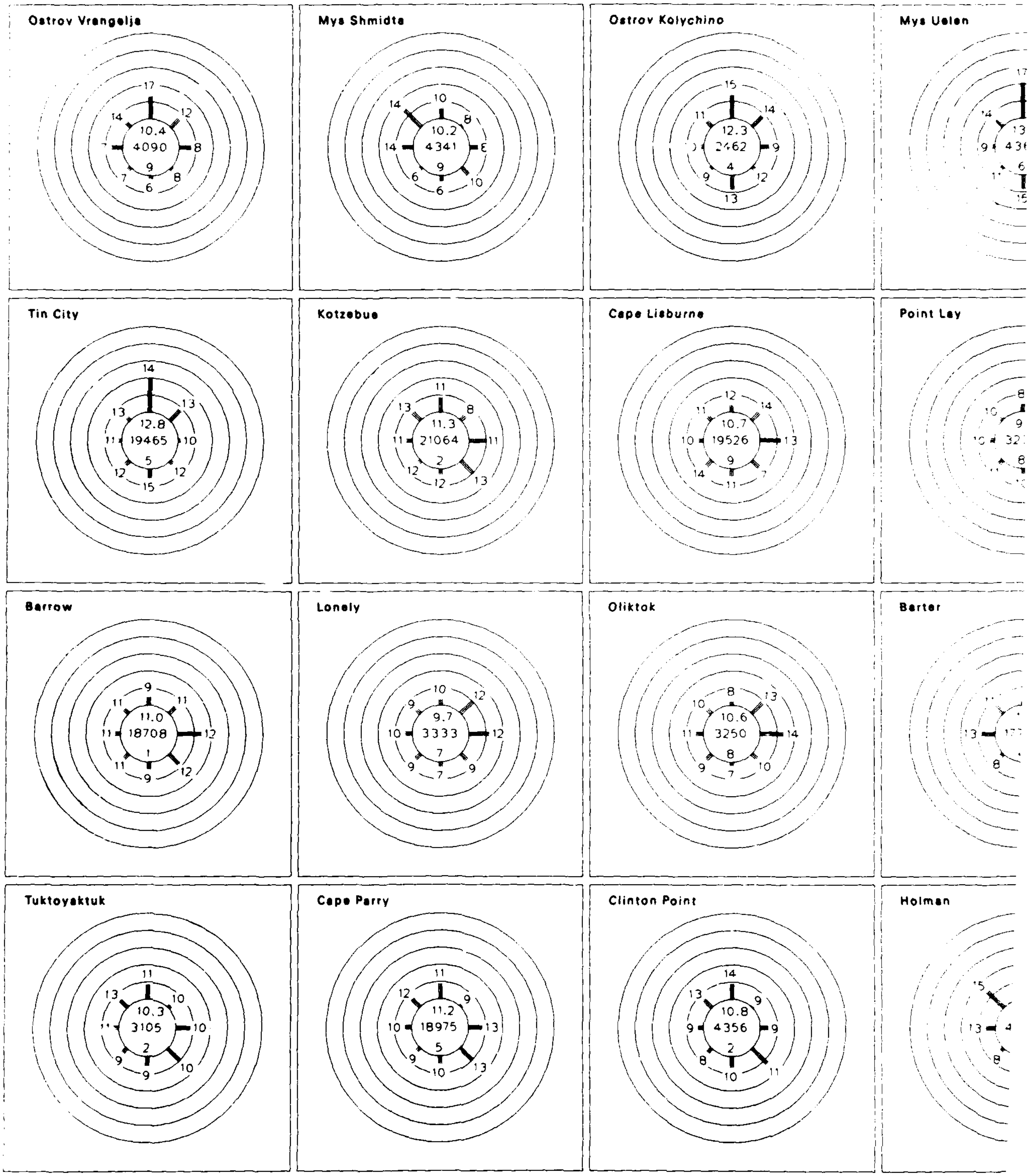
14 Wind Speed and Direction

II-359



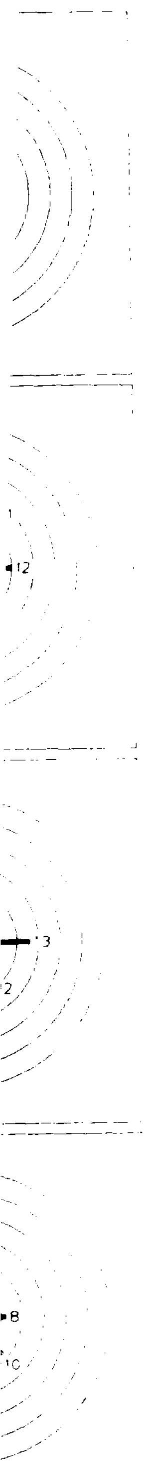
August

II-360

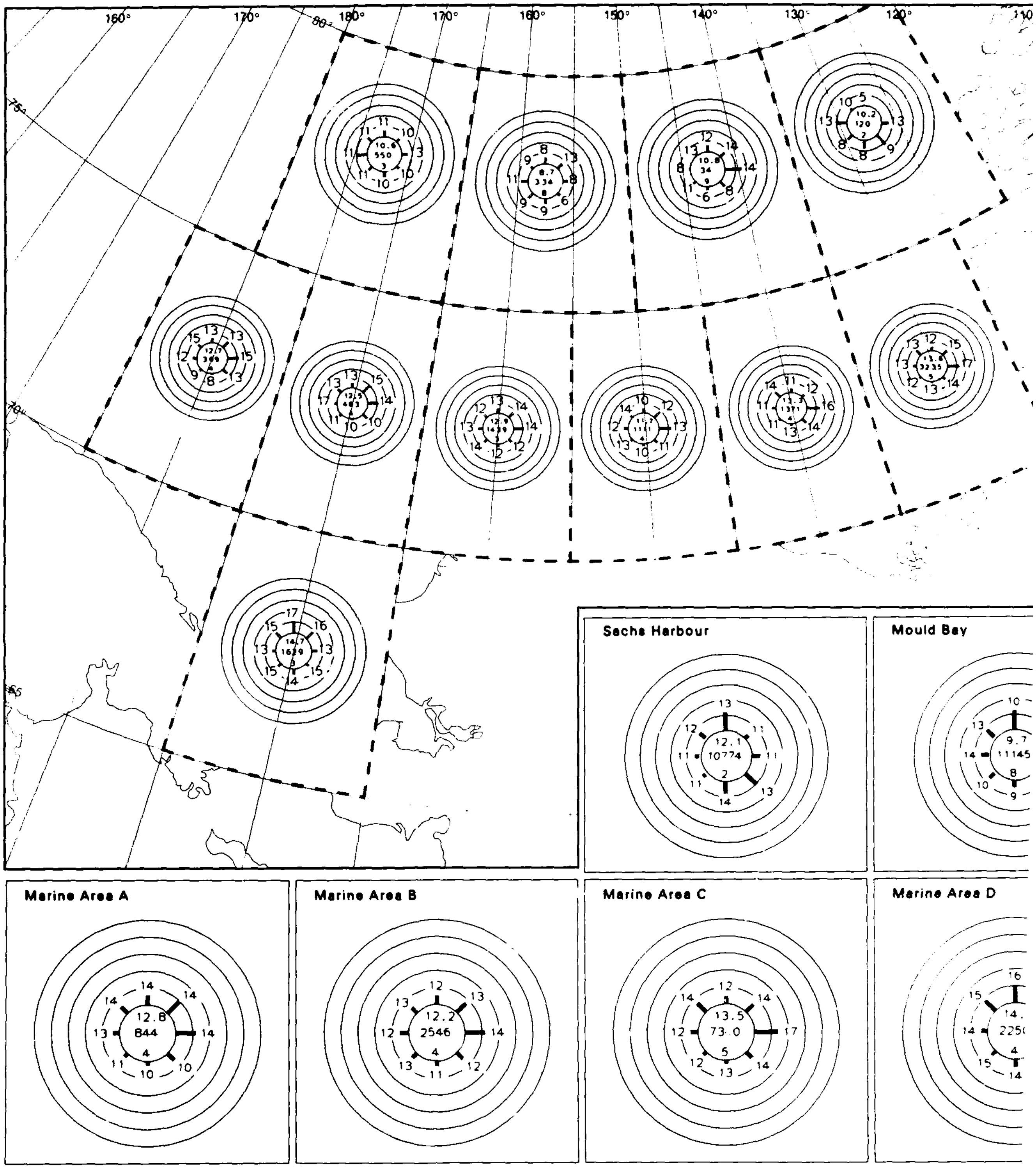


September

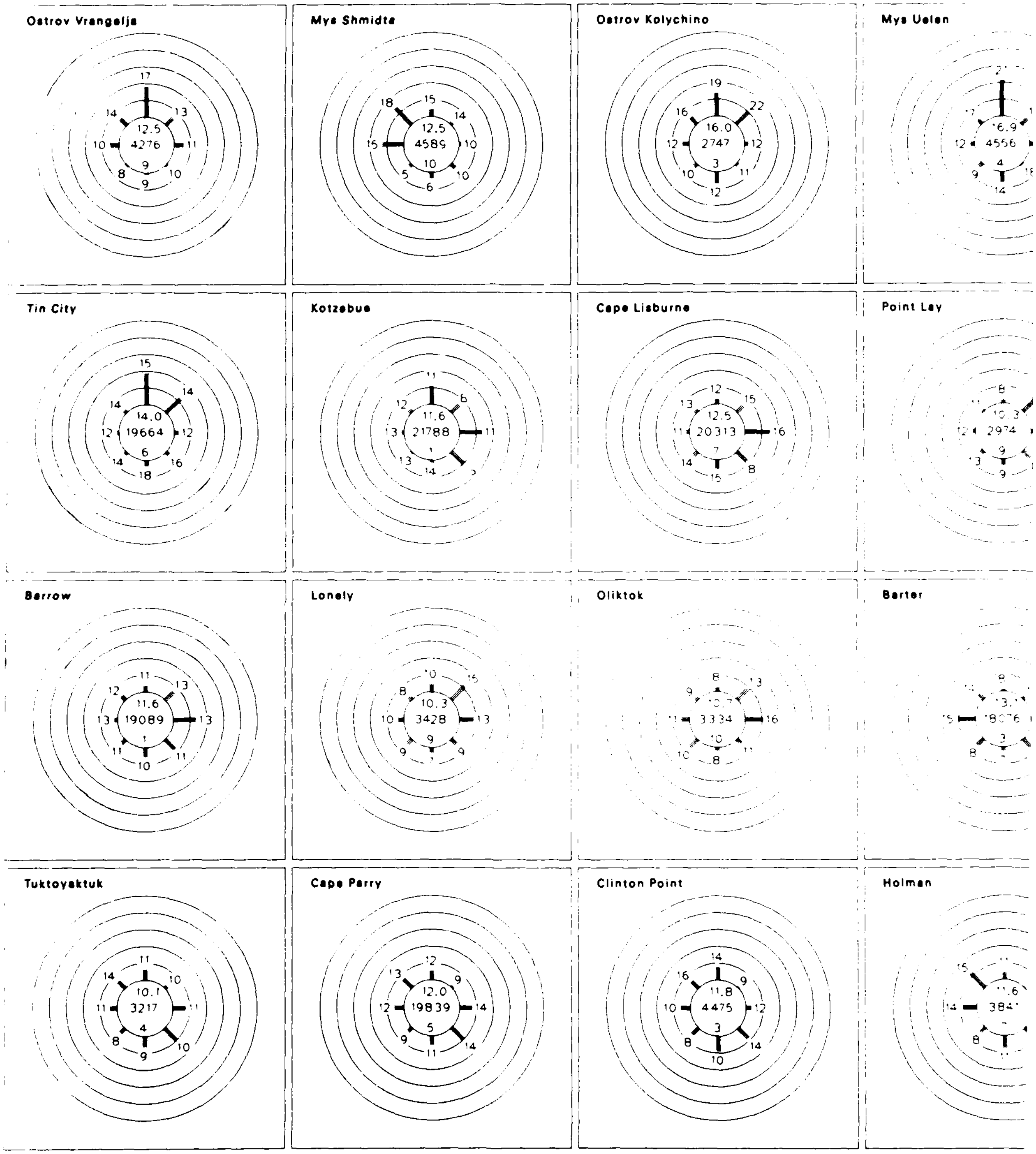
14 Wind Spee



nd Direction



14 Wind Speed and Direction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Ostrov Kolychino
Mys Uelen
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Kotzebue
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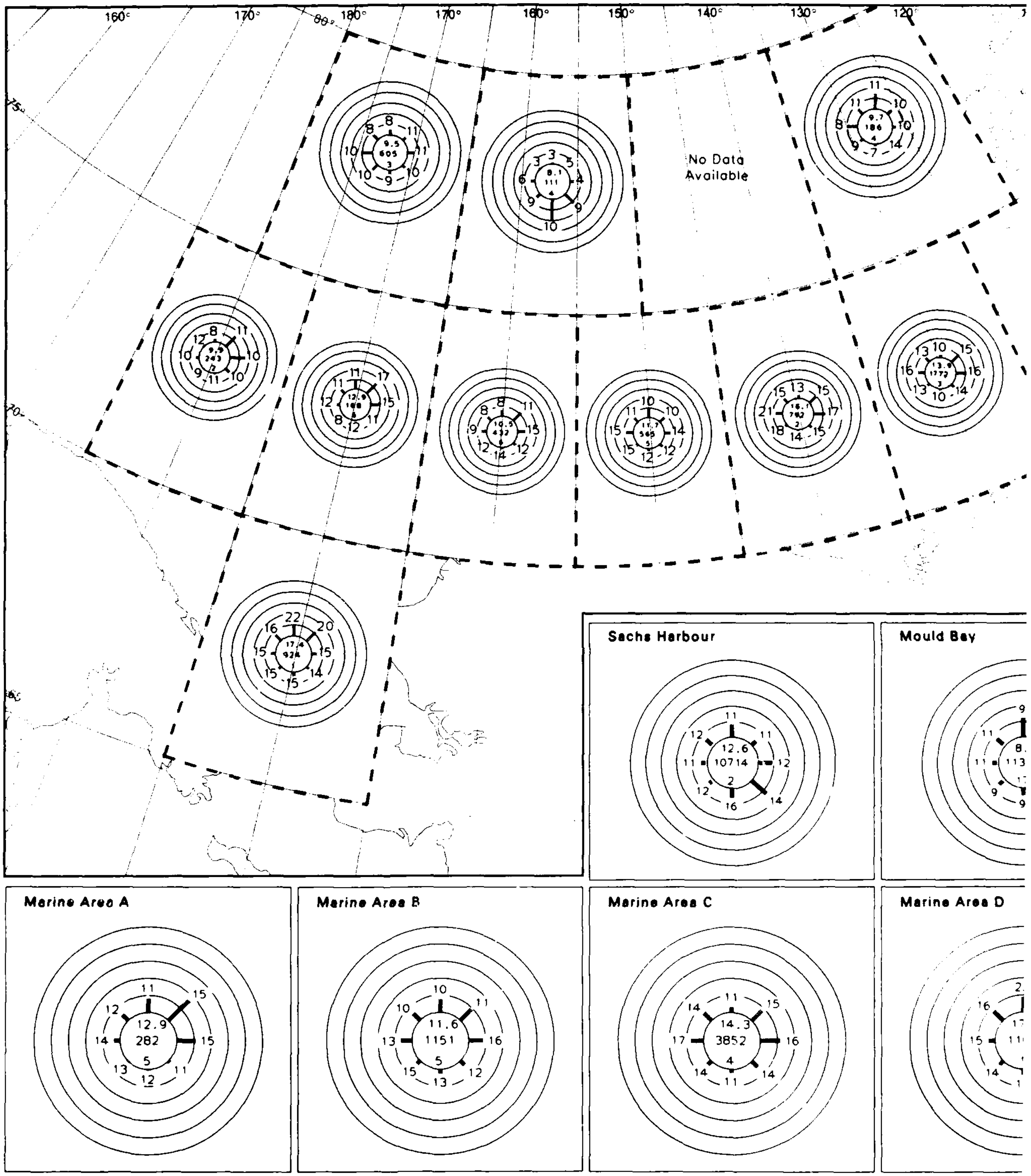
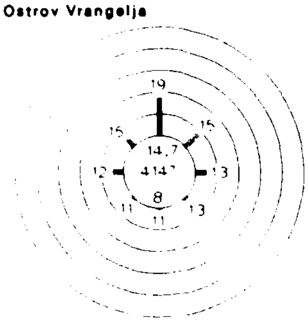
Point Lay
Barrow
Lonely
Oliktok
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
Holman



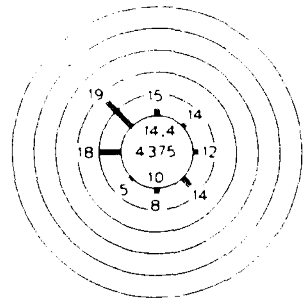
14 Wind Speed and Direction

Direction

Ostrov Vrangelja



Mys Shmidta



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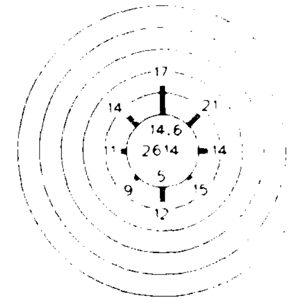

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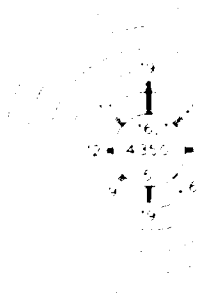
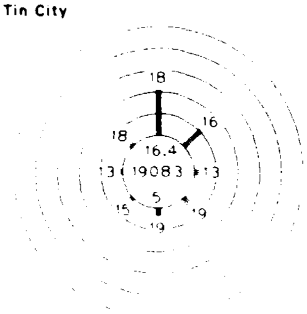


Tin City



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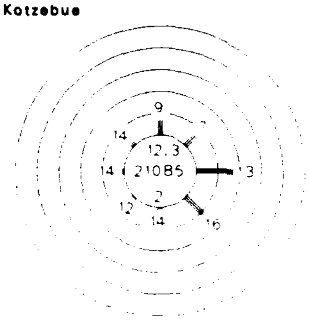

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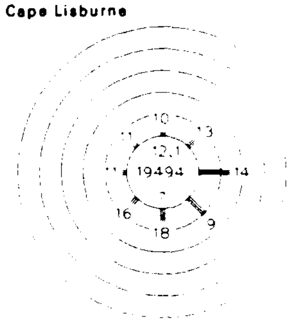
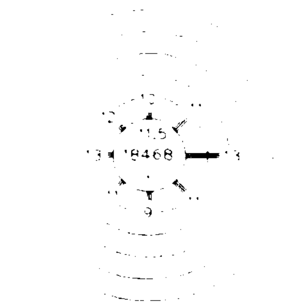


Point Lay

Barrow



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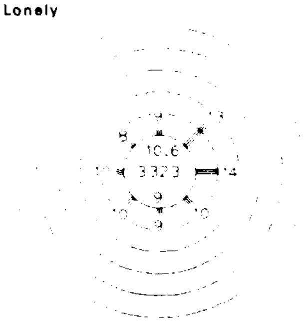
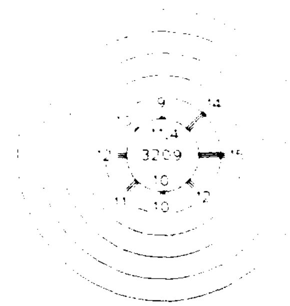


Oliktok



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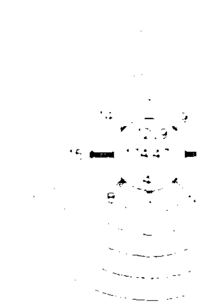
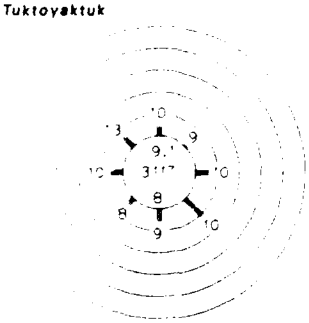
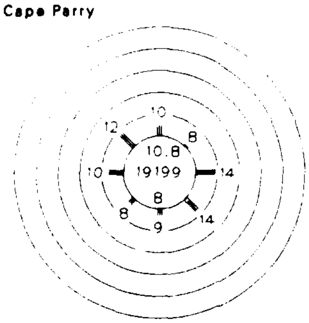


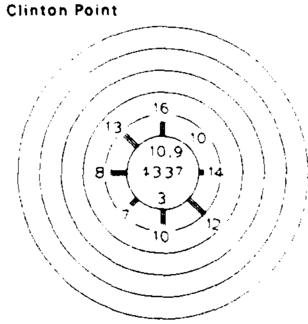
Tuktoyaktuk



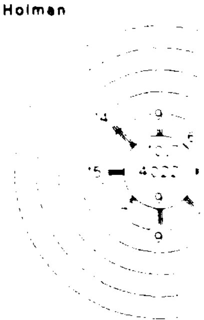
Cape Parry



Clinton Point



Holman



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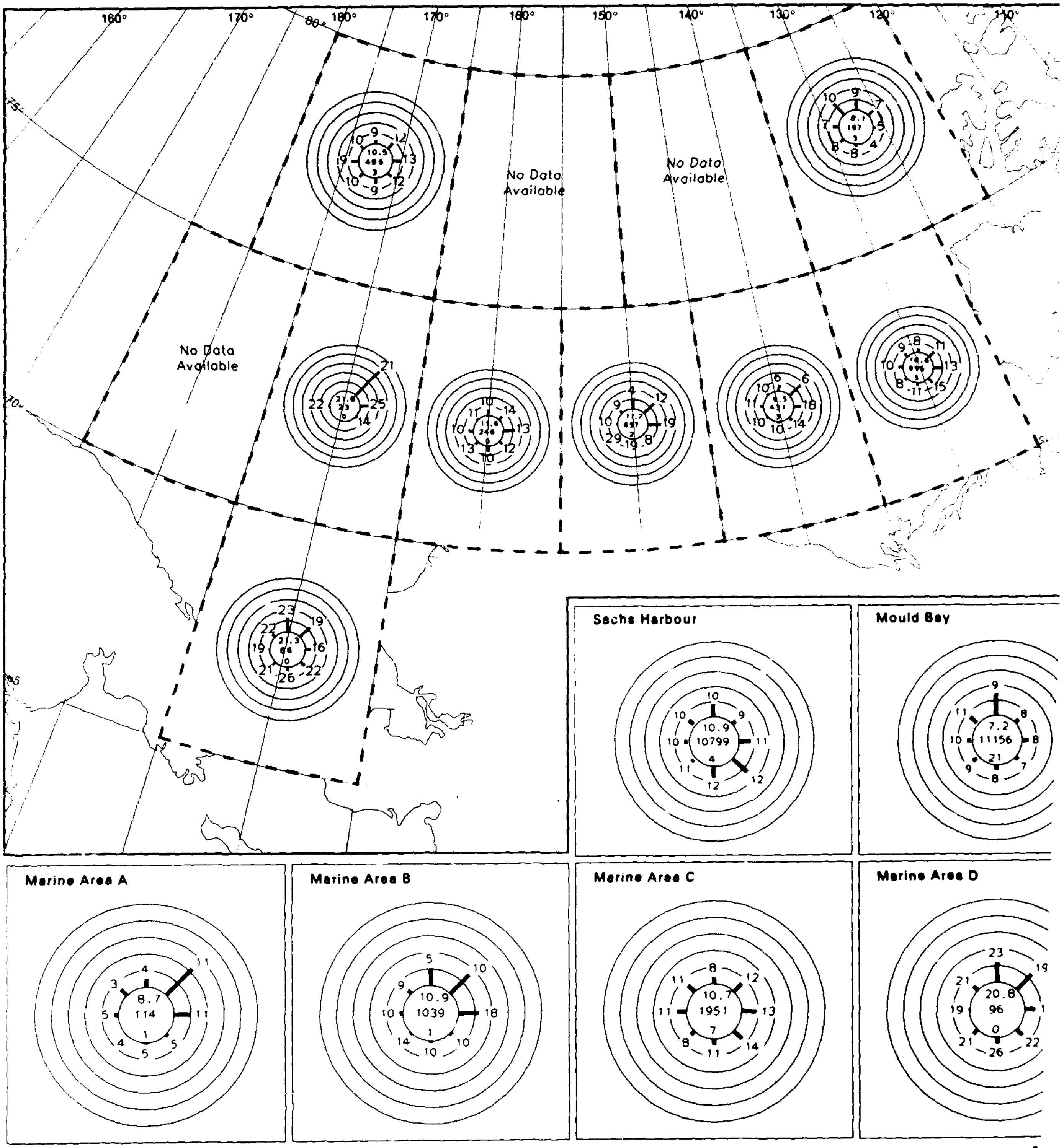
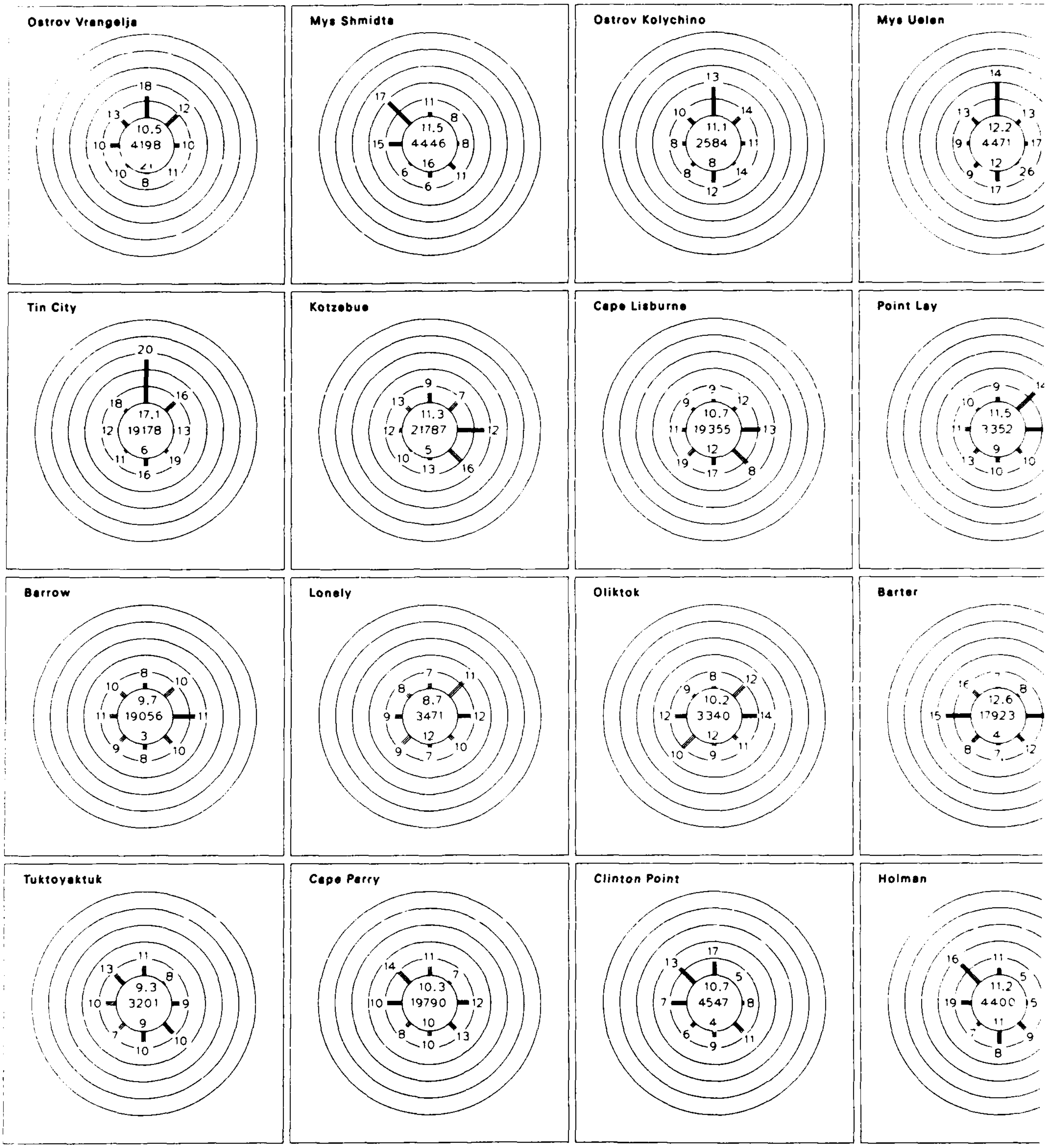
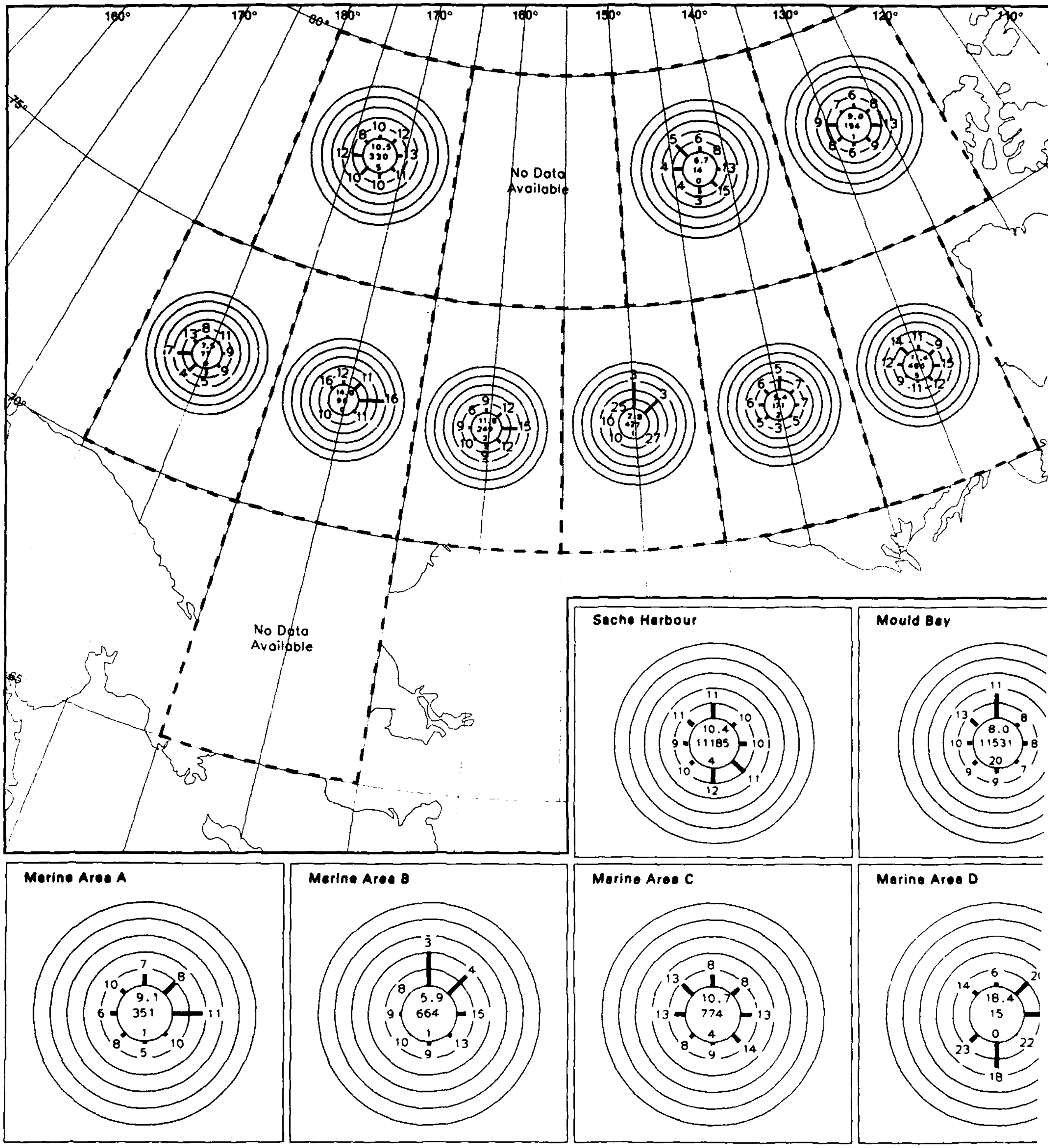


14 Wind Speed and Direction



December

14 Wind Speed and



14 Wind Speed and Direction

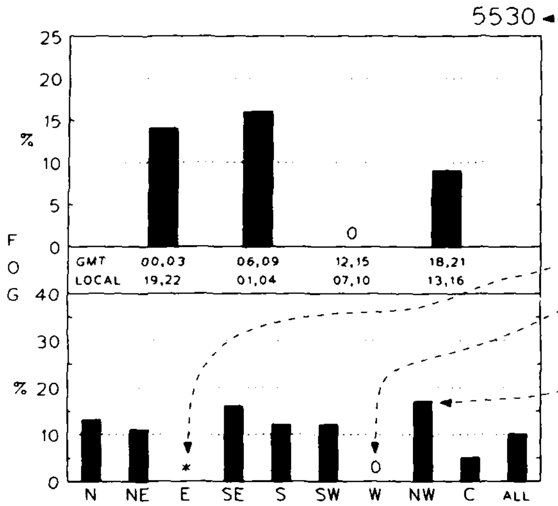
Map 15. Fog and poor visibility

BLACK LINE – Percent frequency of visibility <1/2 nautical mile.

BLUE LINE – Percent frequency of fog occurring without precipitation.

Albers Equal–Area Conic Projection

Graphs: Fog/time and fog/wind direction



Number of observations.

Bar graphs represent percent frequency of fog (wit precipitation) for various hour groupings and wind direct Data are based on 100% for each hour-group and dire category.

*** indicates <.05% but >0.**

0 indicates no fog occurred with the wind direction.

(Data show that 17% of all NW winds were accompanied by Fog (without precipitation).)

Fog is composed of minute droplets suspended in the atmosphere near the earth's surface which have no visibl motion (fog is a stratus cloud on the surface). Fog is distinguished from haze (suspended dust or salt particles, yello in color) by its dampness and grey color; also its restriction of visibility (less than one-half nautical mile) if deeper th height considered average for the observer above the sea surface while standing on the bridge of a ship (WMO code exists when the difference between the air and dew point temperatures is more than 2.5 °C. Present weather coding marine observation is restricted to reporting of fog only when no precipitation is occurring at the time of observat sent weather code table in the text of Set 2). Therefore, determination of occurrences of either fog with precipitatior not possible. The isopleth presentation (BLACK LINE) of visibility less than one-half nautical mile, includes re visibility due to any weather phenomena; i.e., fog, precipitation, dust, smoke, etc.

15 Legend

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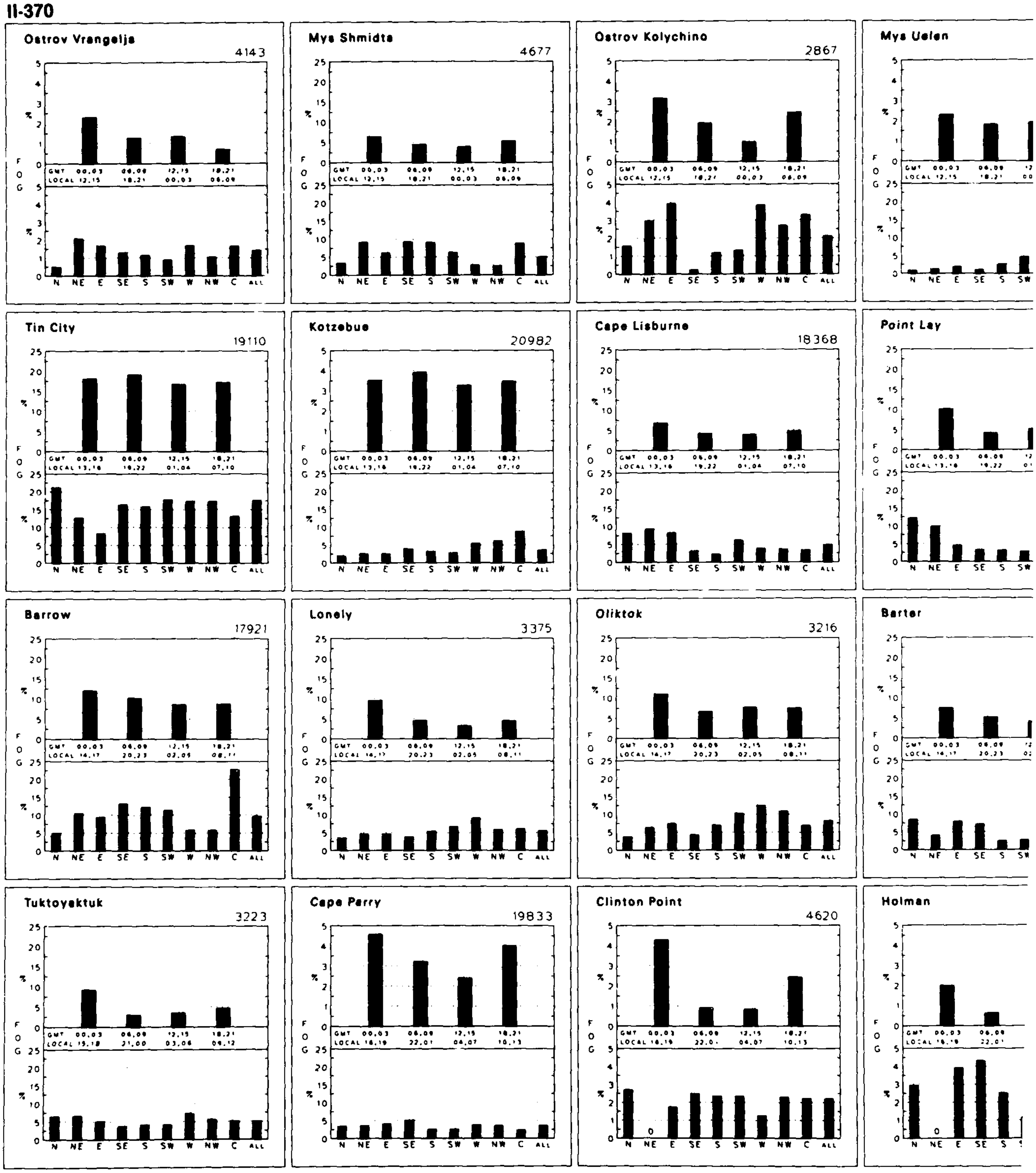

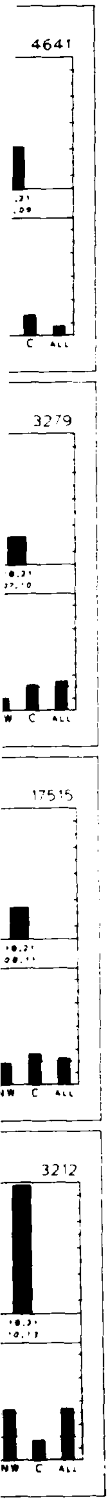

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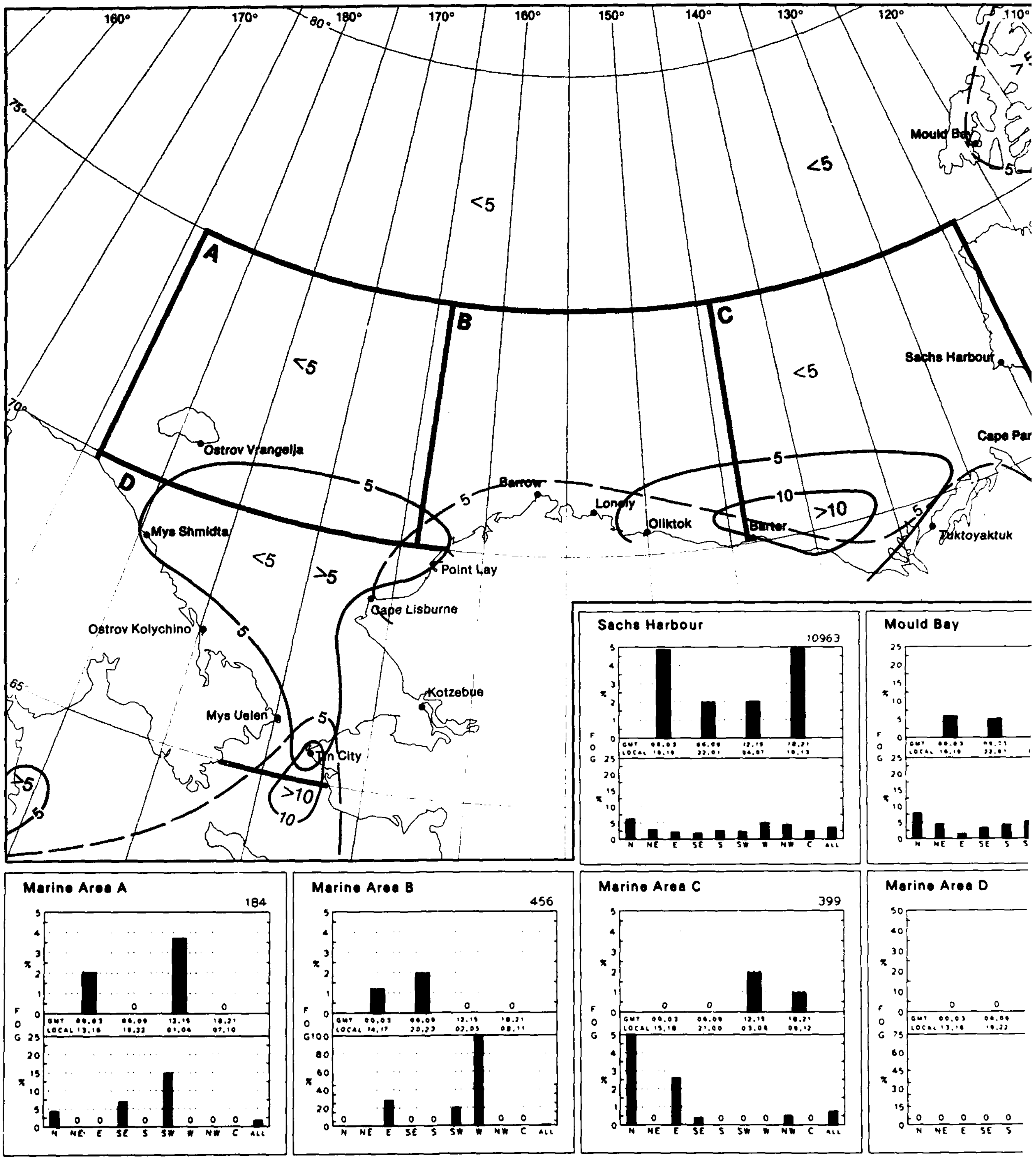
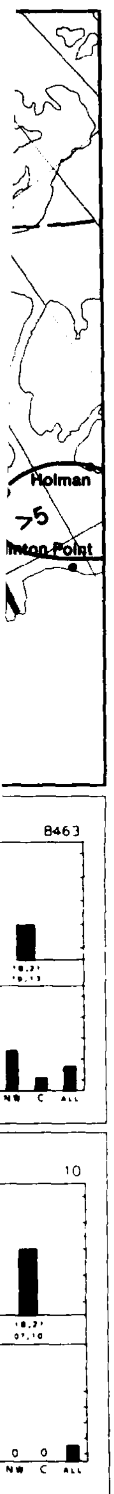


15 Fog and Poor Visibility



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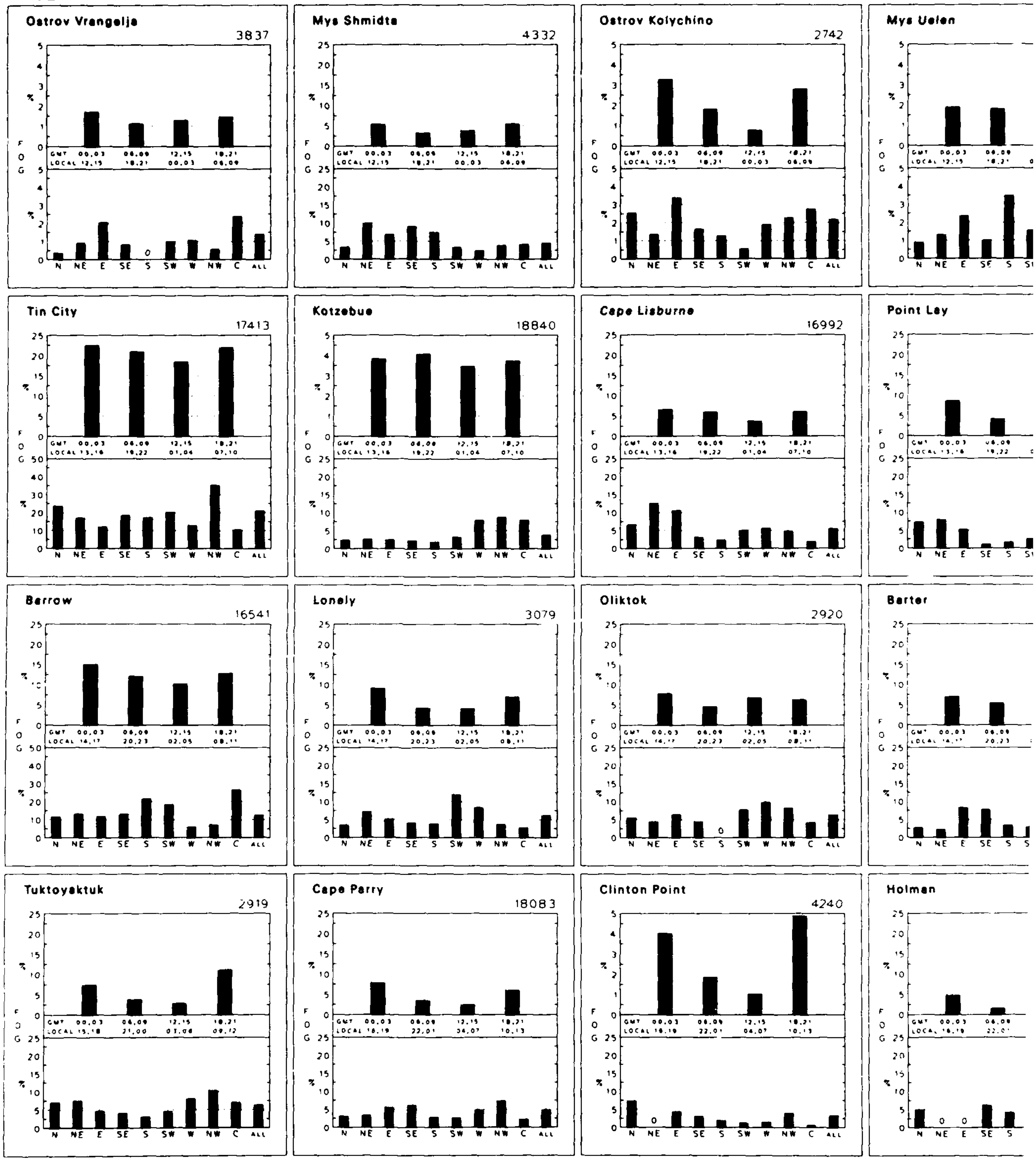
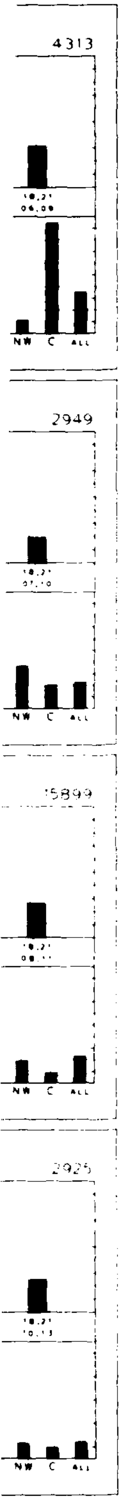
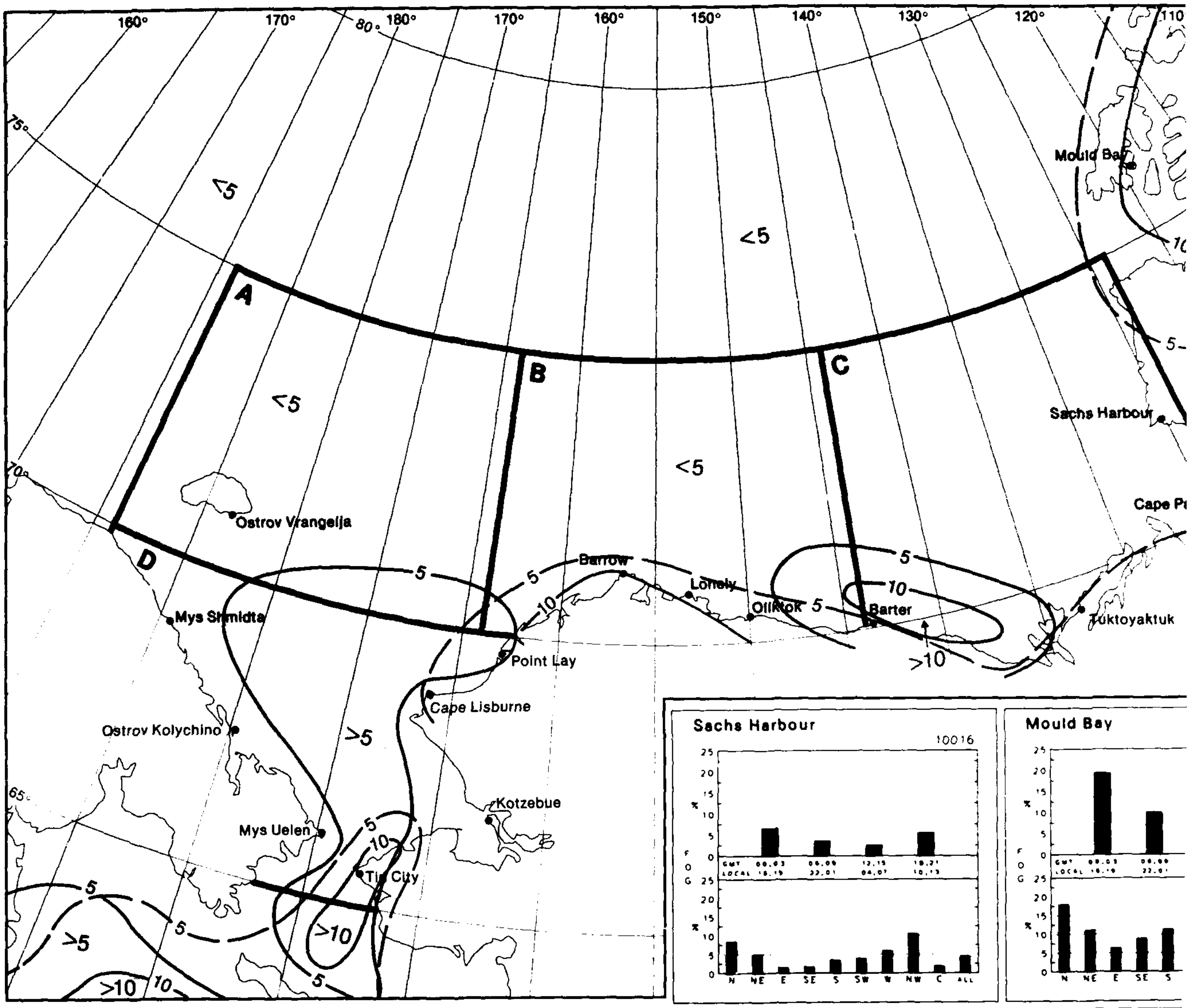


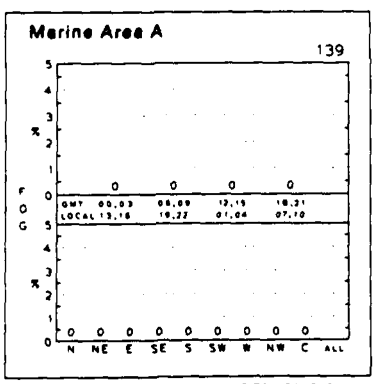
February

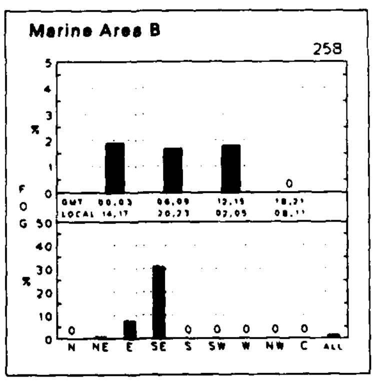
15 Fog-Time and Fog-Wi

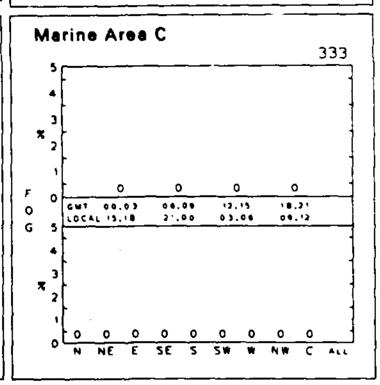


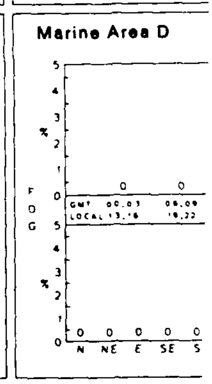
Direction



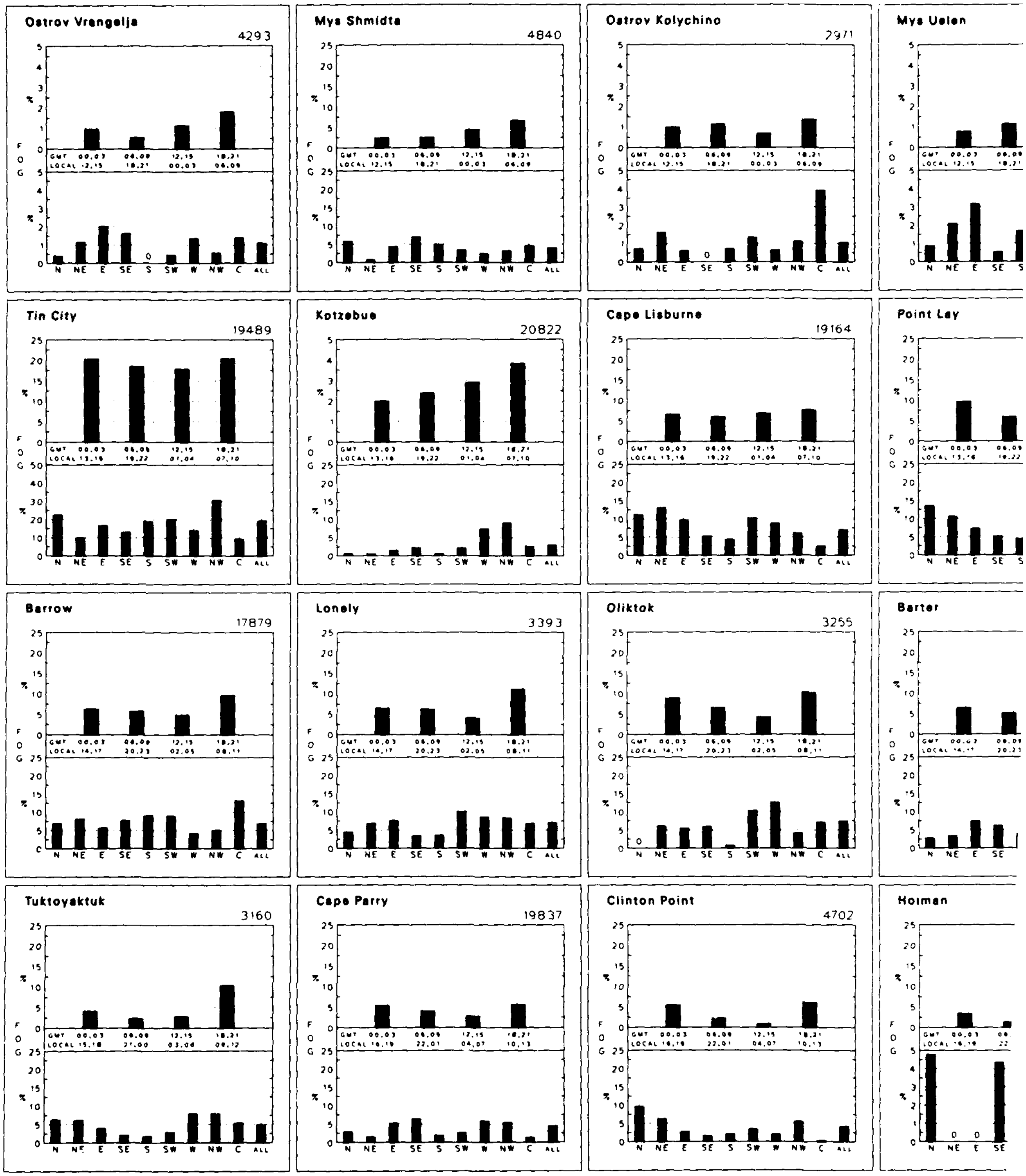








15 Fog and Poor Visibility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Cape Lisburne
19164
Point Lay
Barrow
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Lonely
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Barter
Tuktoyaktuk
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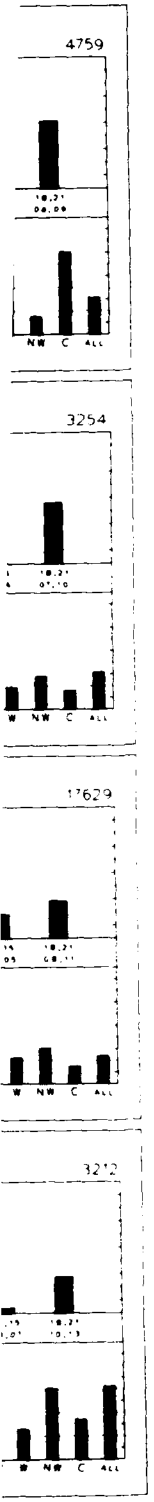
Cape Parry
19837
Clinton Point
4702
Holman



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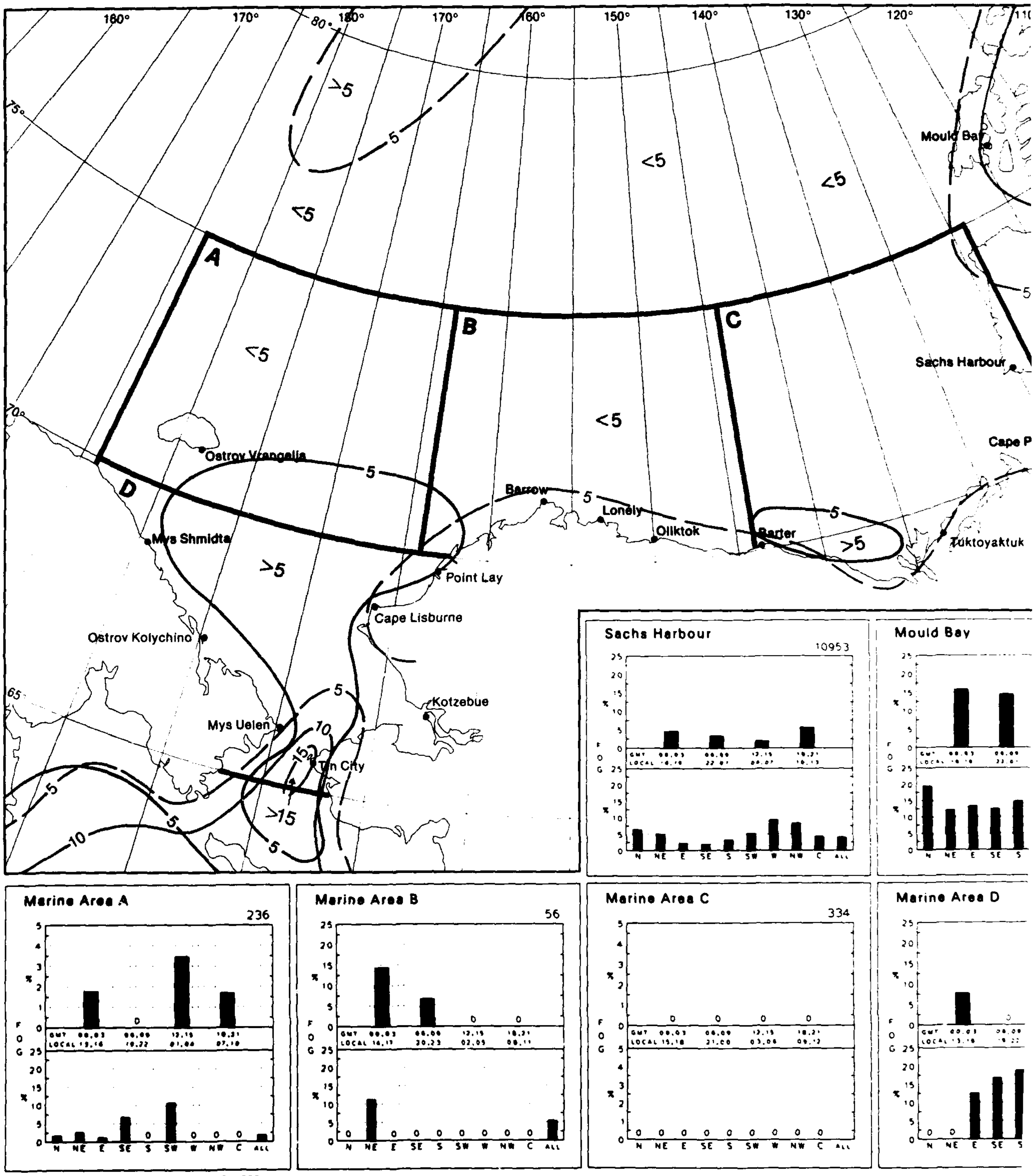
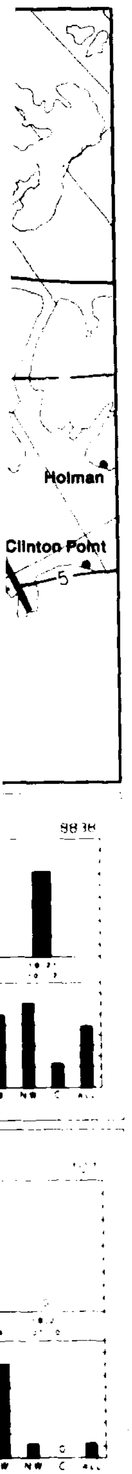


15 Fog and Poor Visibility



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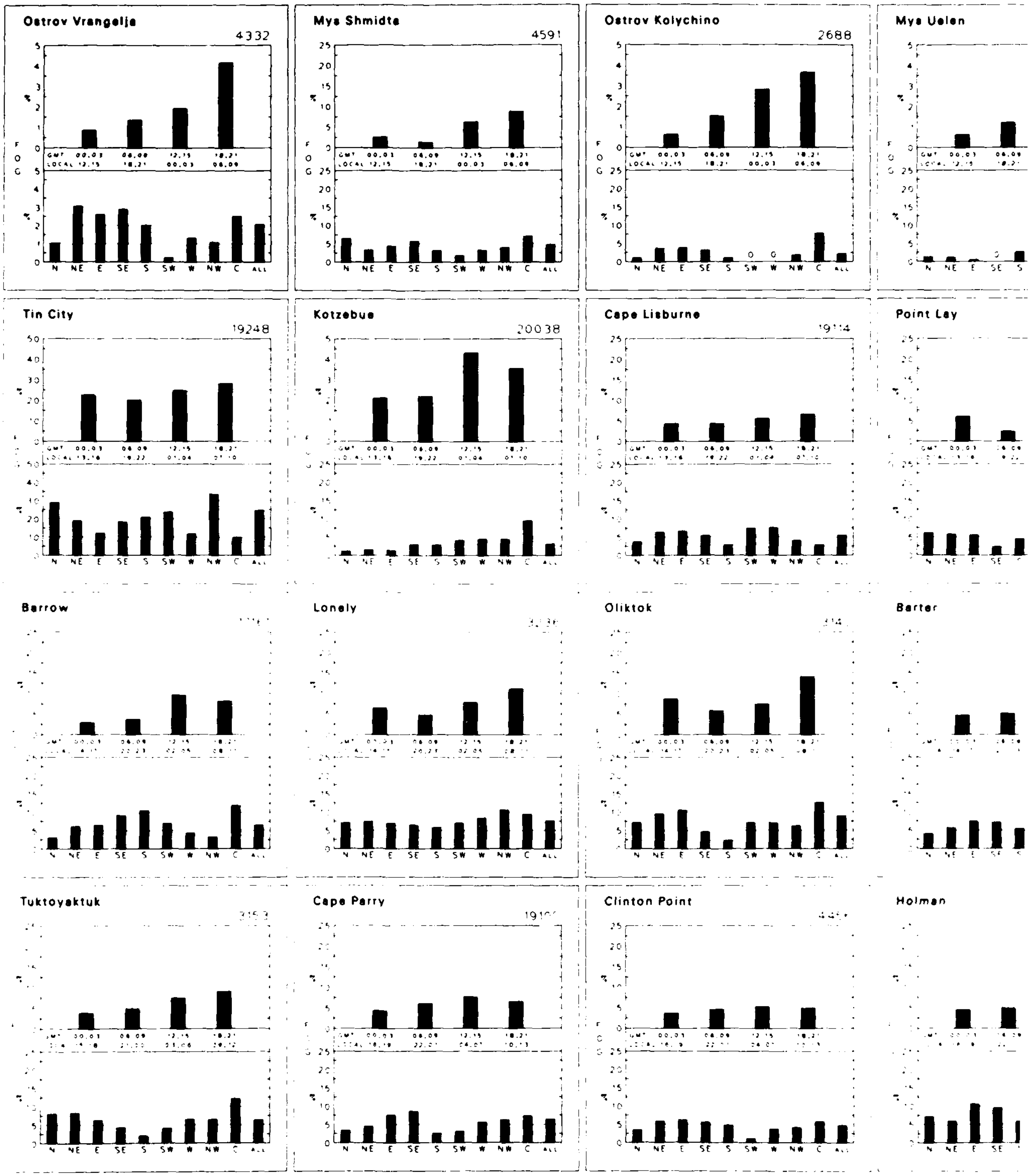
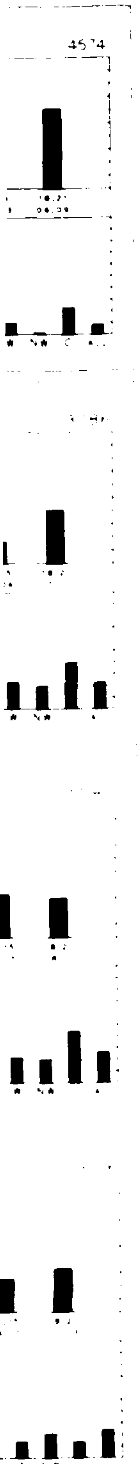
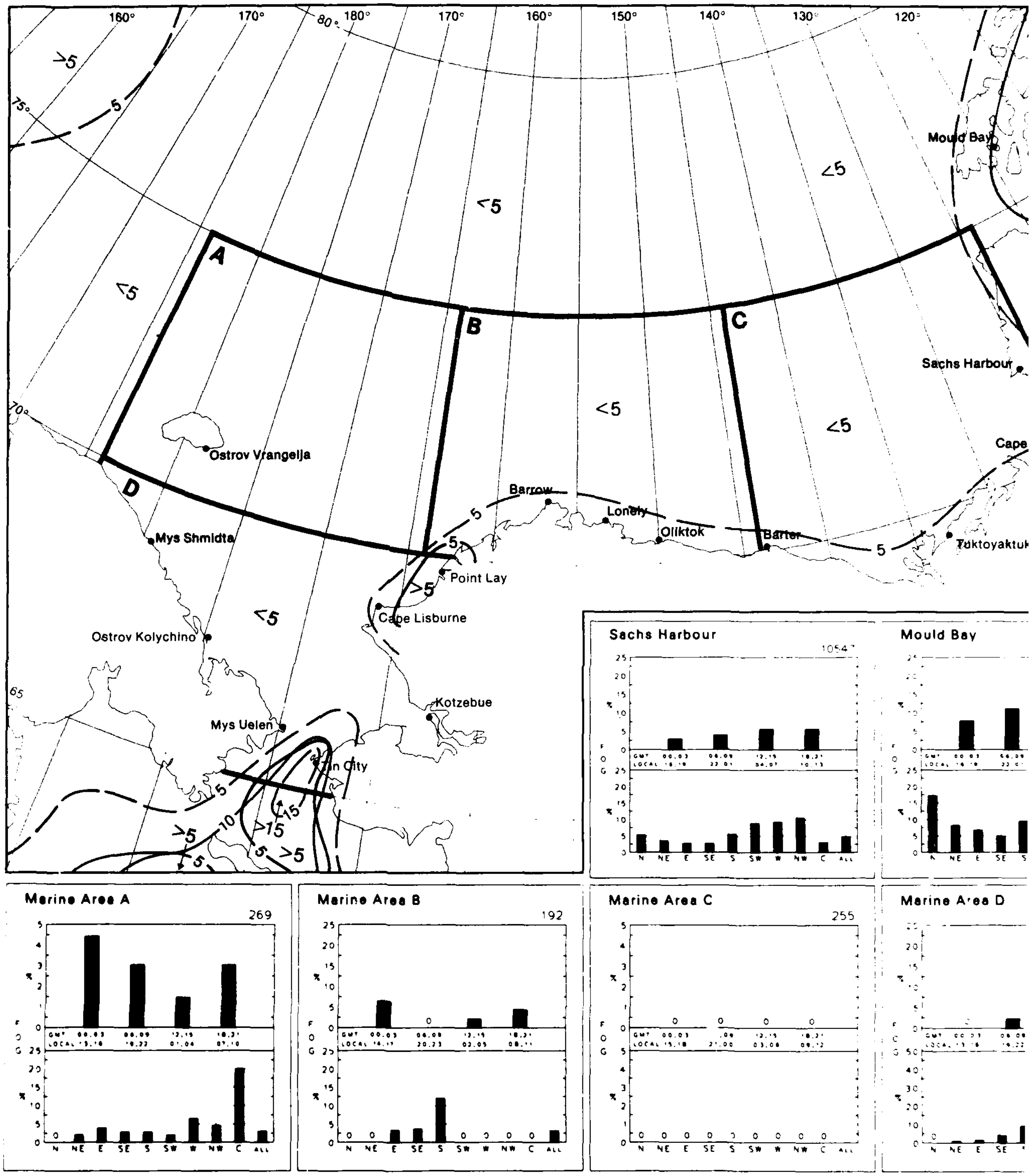


April

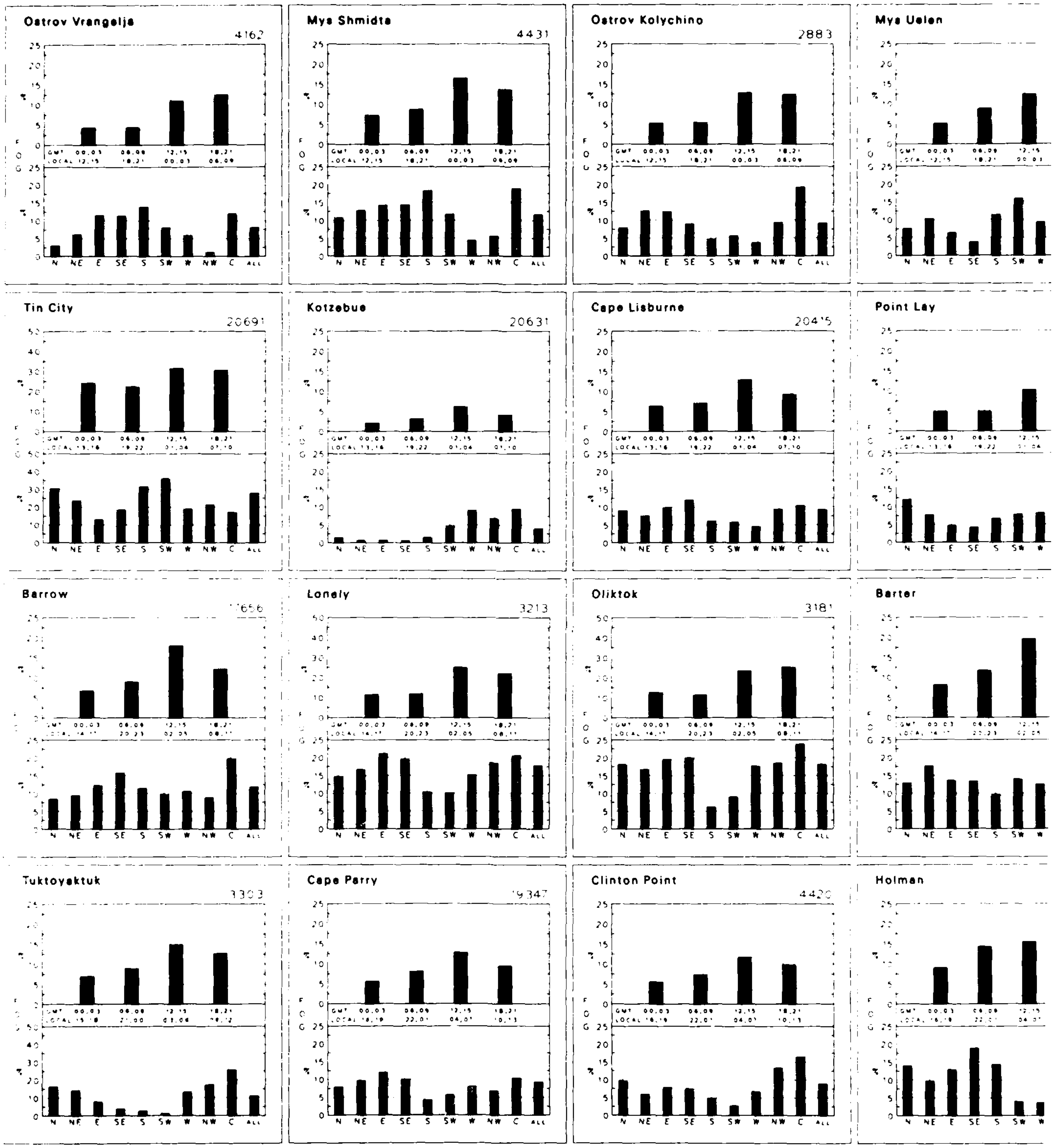
15 Fog-Time and Fog-V



d Direction



15 Fog and Poor Visibility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Mys Shmidta
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Ostrov Kolychino
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Mys Uelen
Tin City
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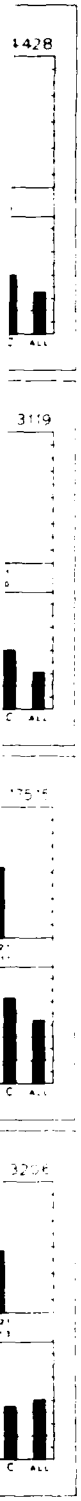
Kotzebue
20631
Cape Lisburne
204'5
Point Lay
Barrow
Lonely
3213
Oliktok
318'
Barter
Tuktoyaktuk
Cape Parry
Clinton Point
Holman
N NE E SE S SW W NW C ALL



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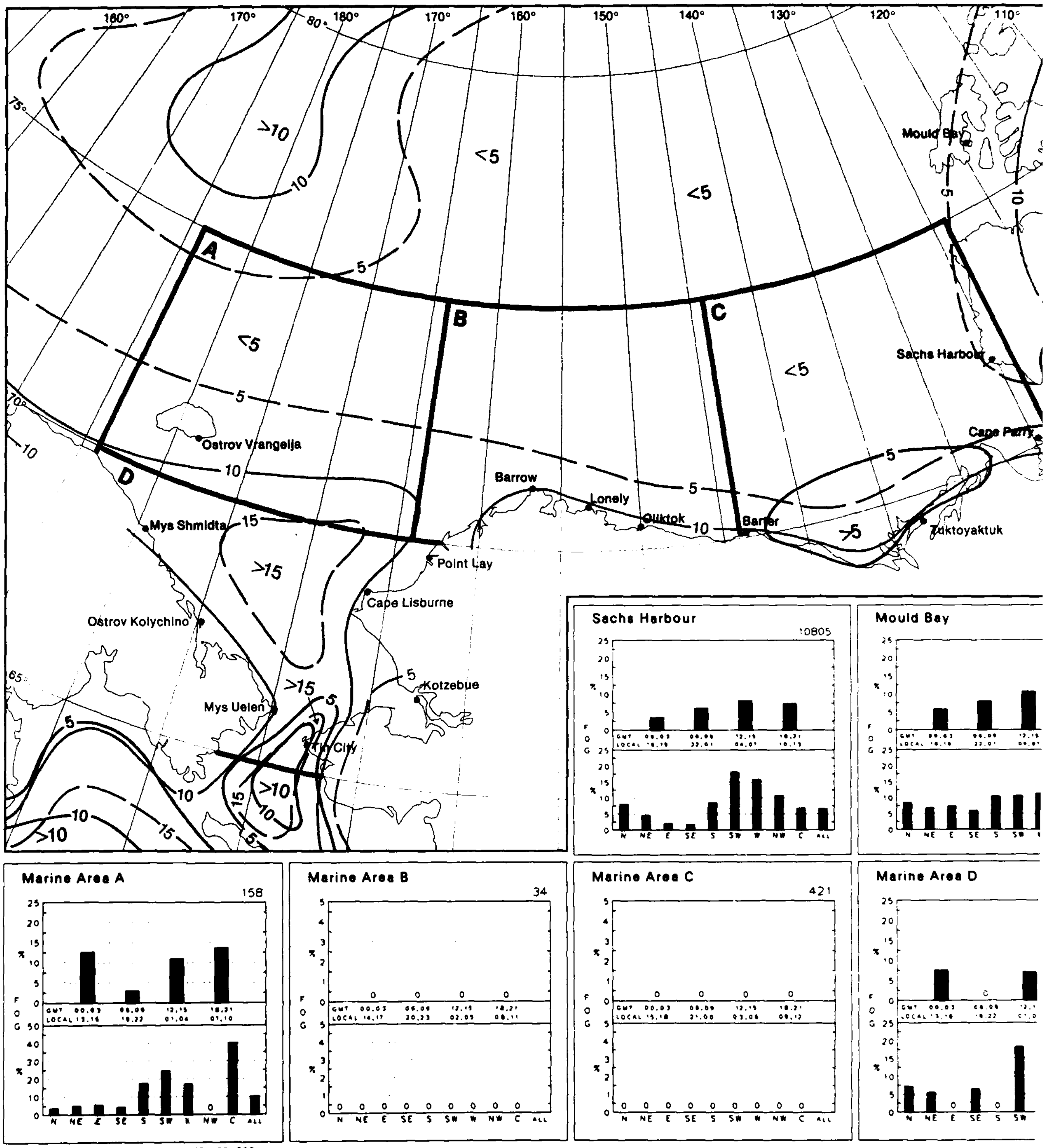
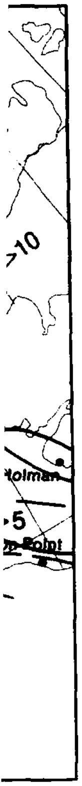
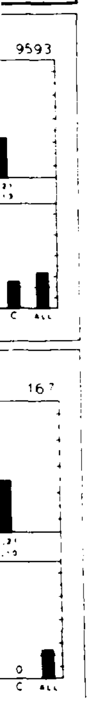
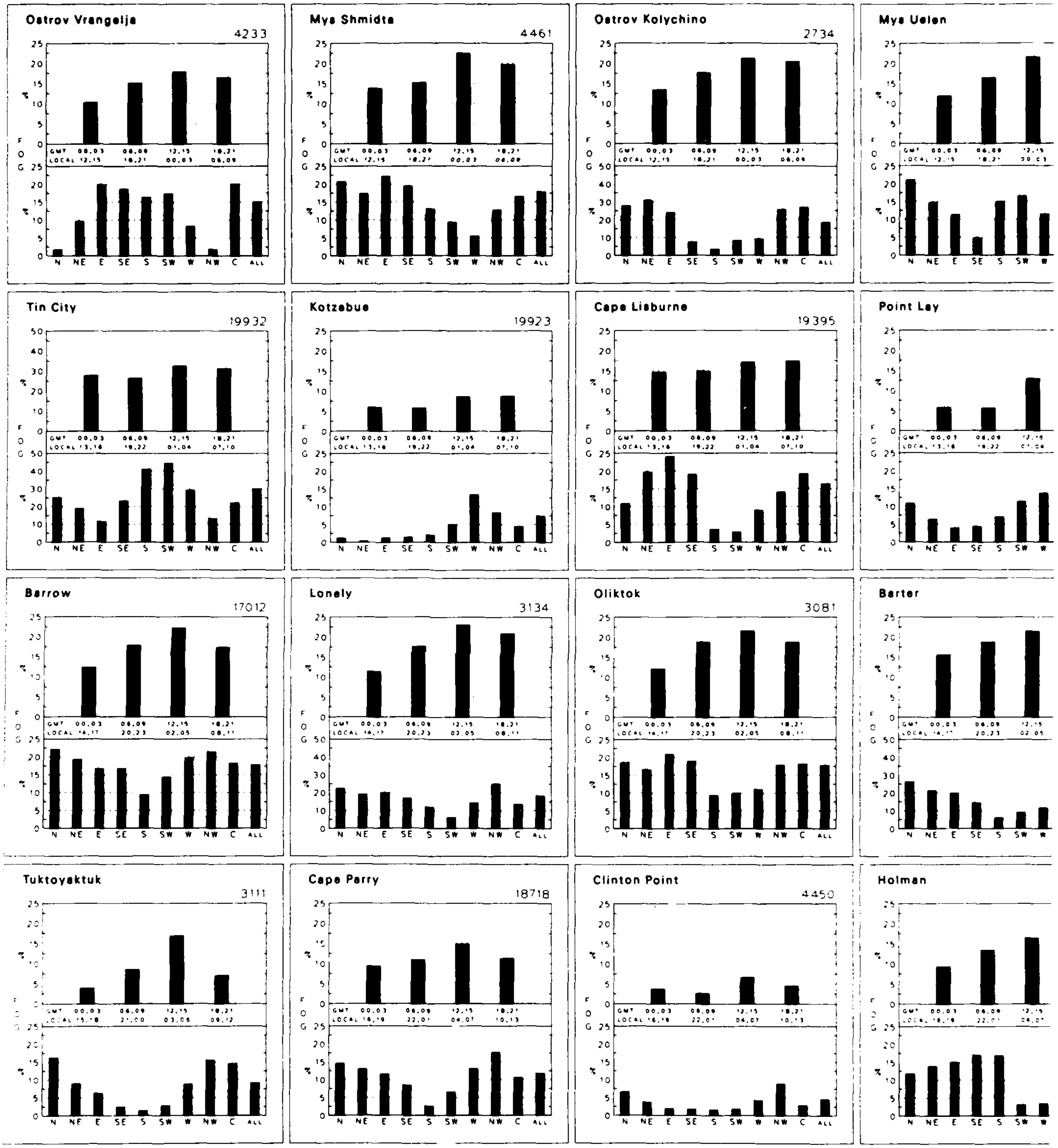


15 Fog and Poor Visibility



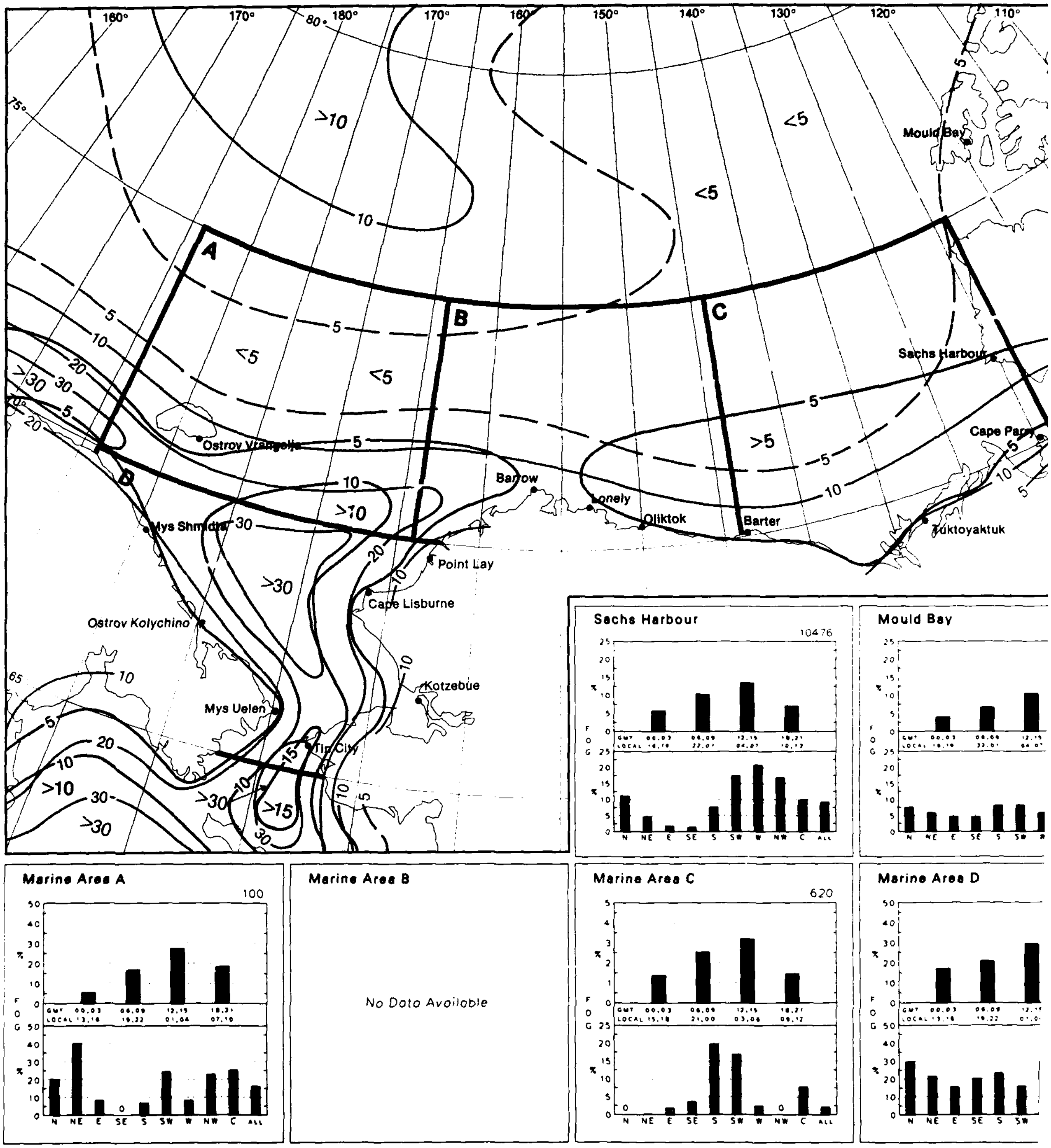


May

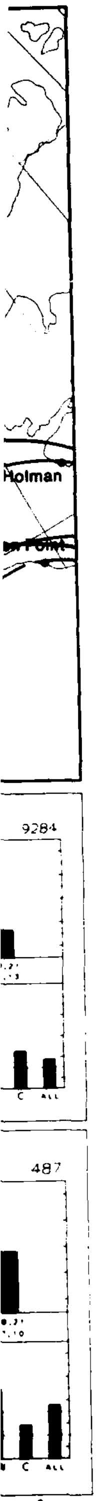


June

15 Fog-Time and Fog-Wind I



15 Fog and Poor Visibility



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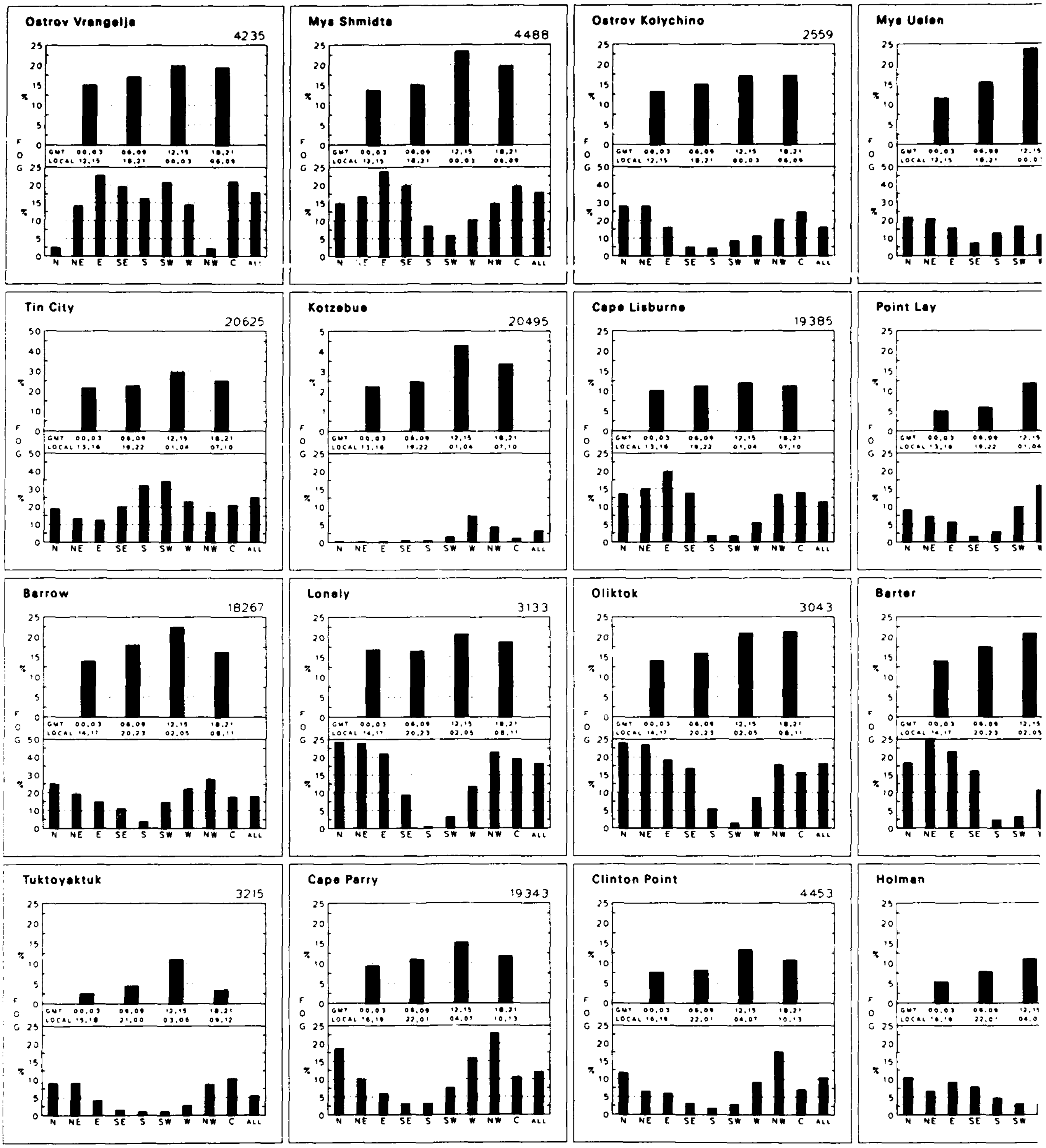
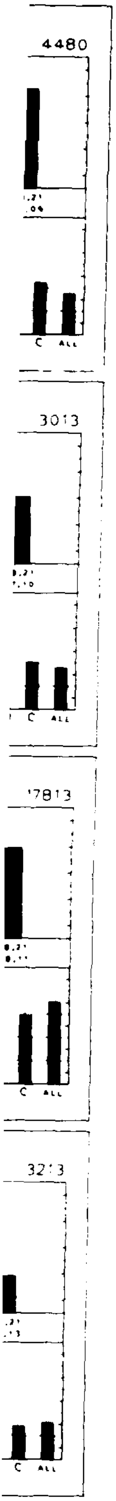


July

15 Fog-Time and Fog-Wind



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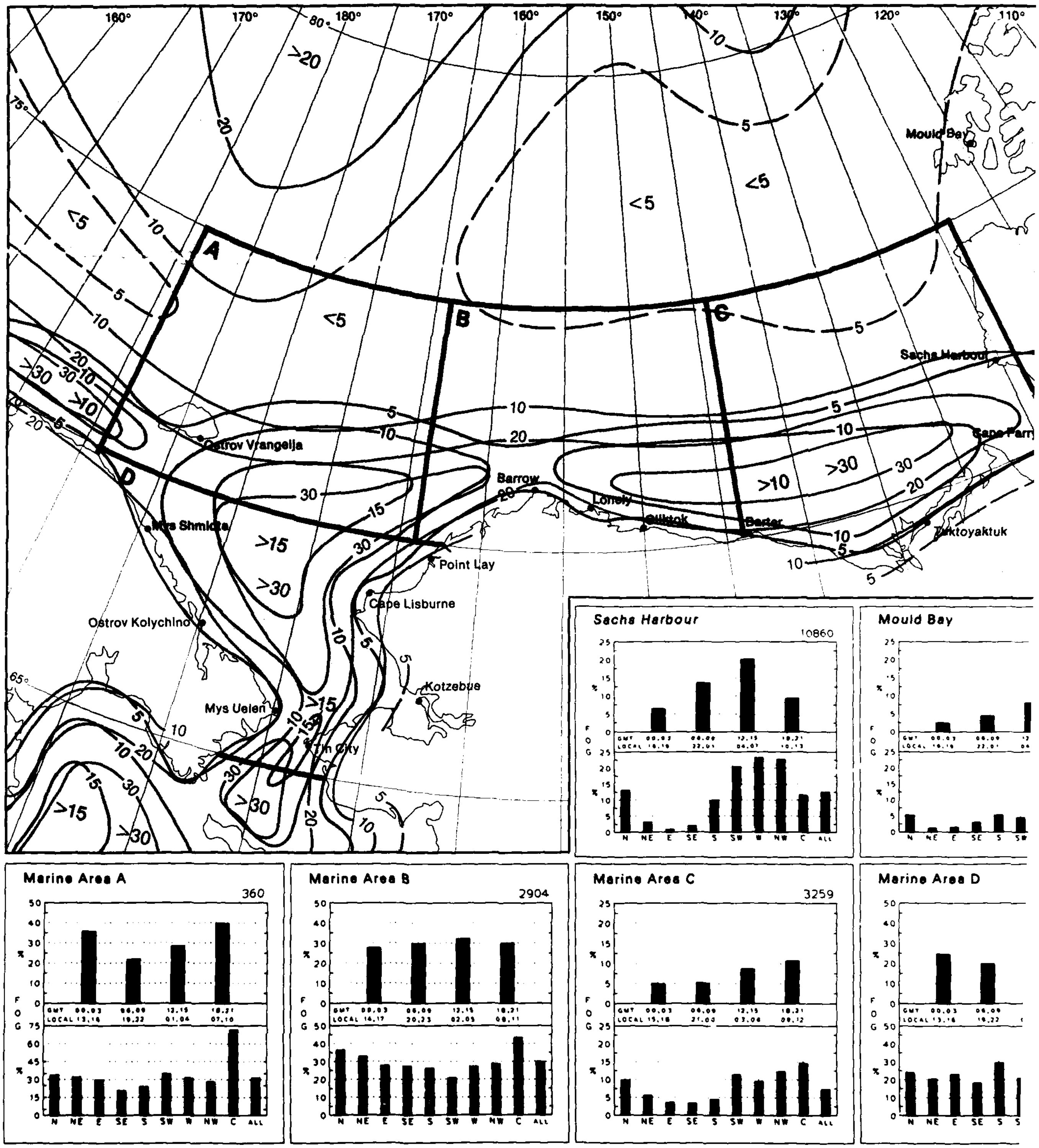
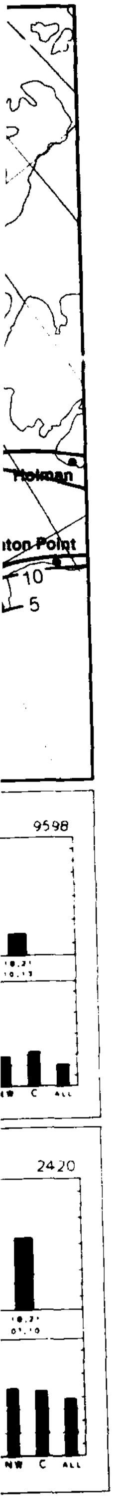


15 Fog and Poor Visibility



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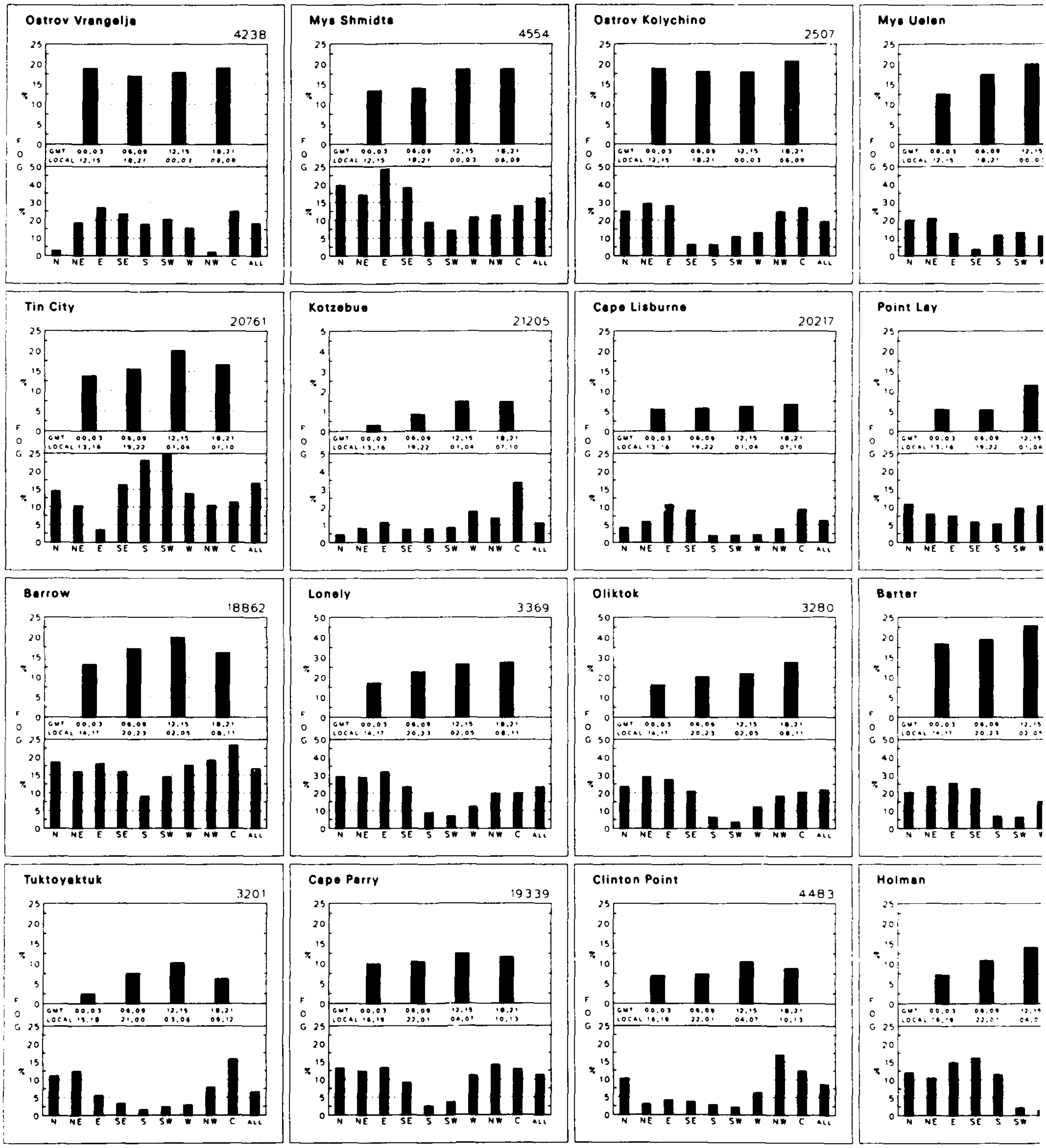
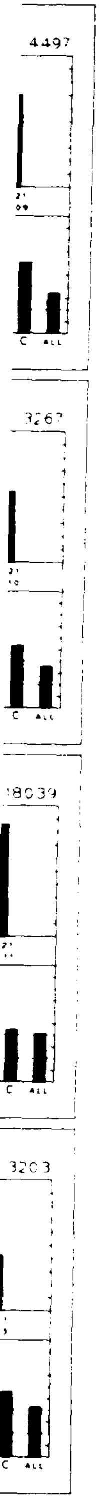


August

15 Fog-Time and Fog-Wind



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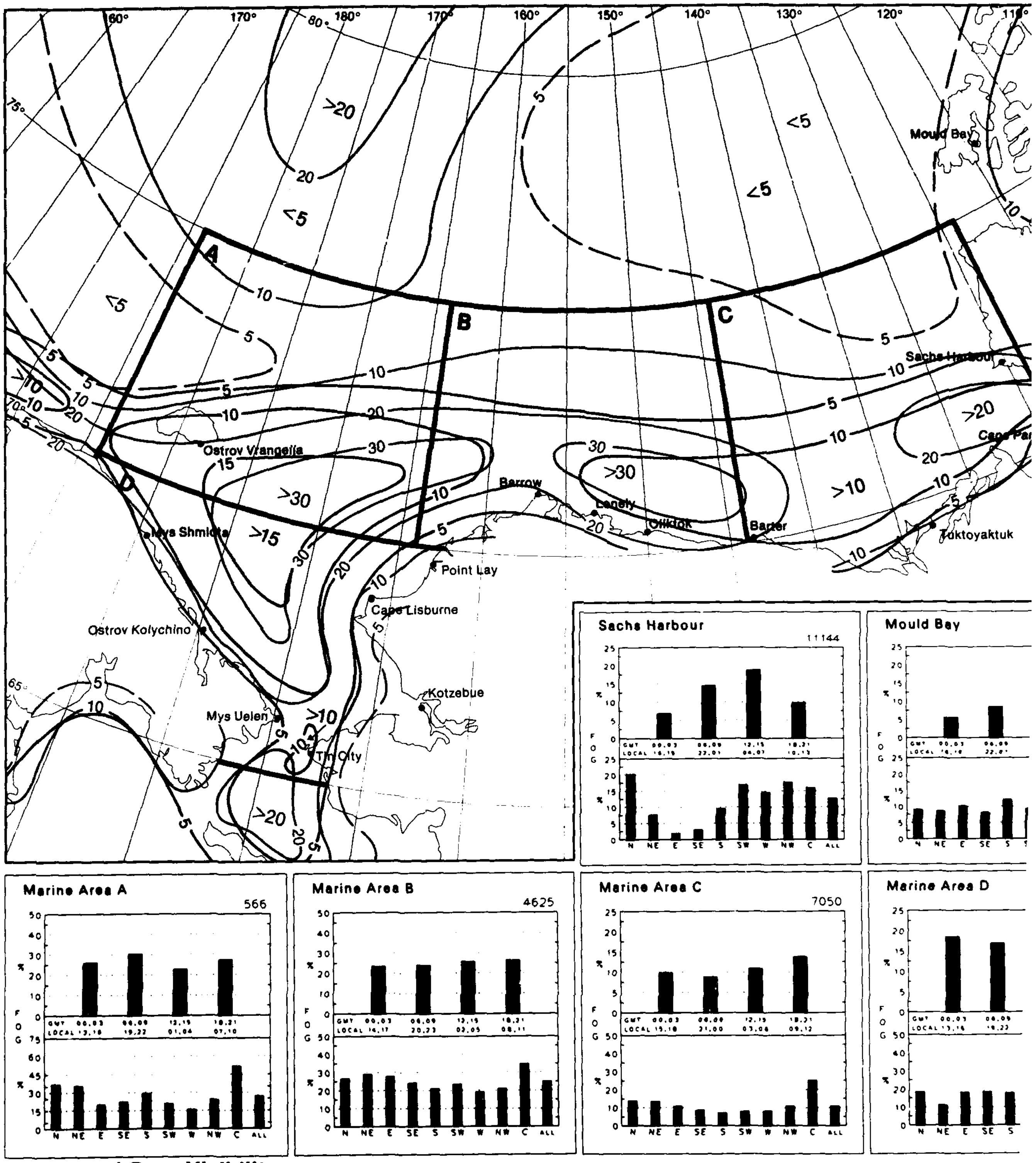
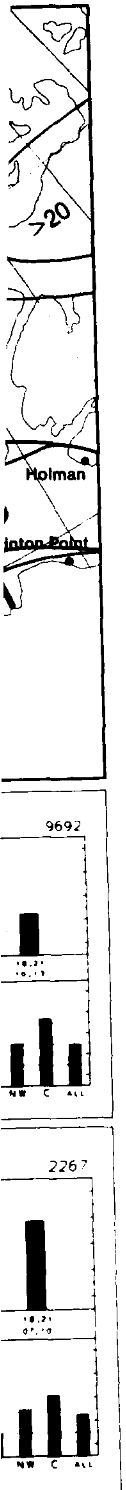


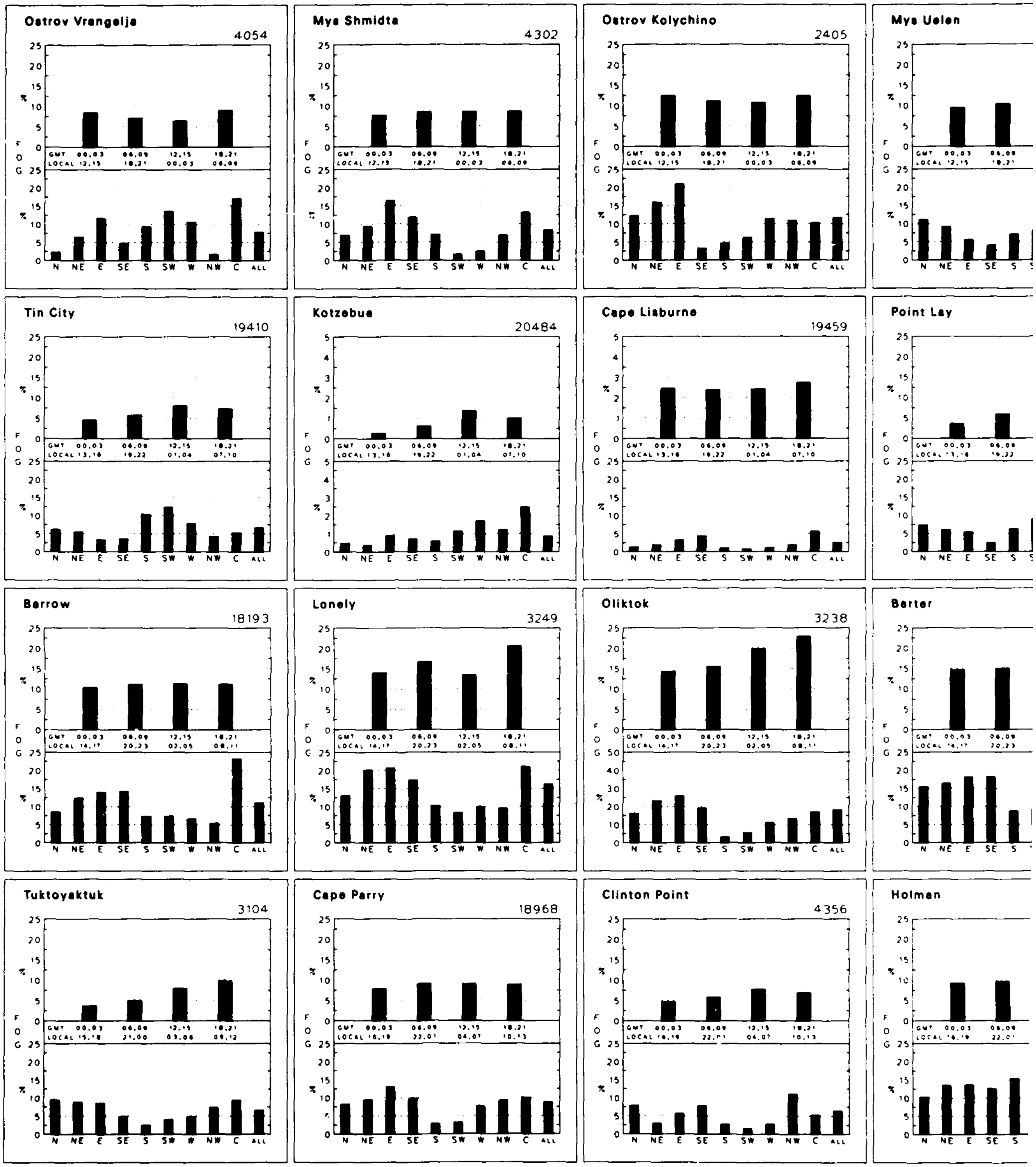
15 Fog and Poor Visibility

II-385



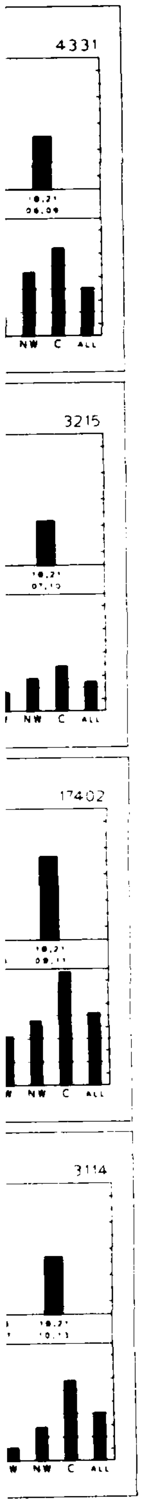
August

II-386

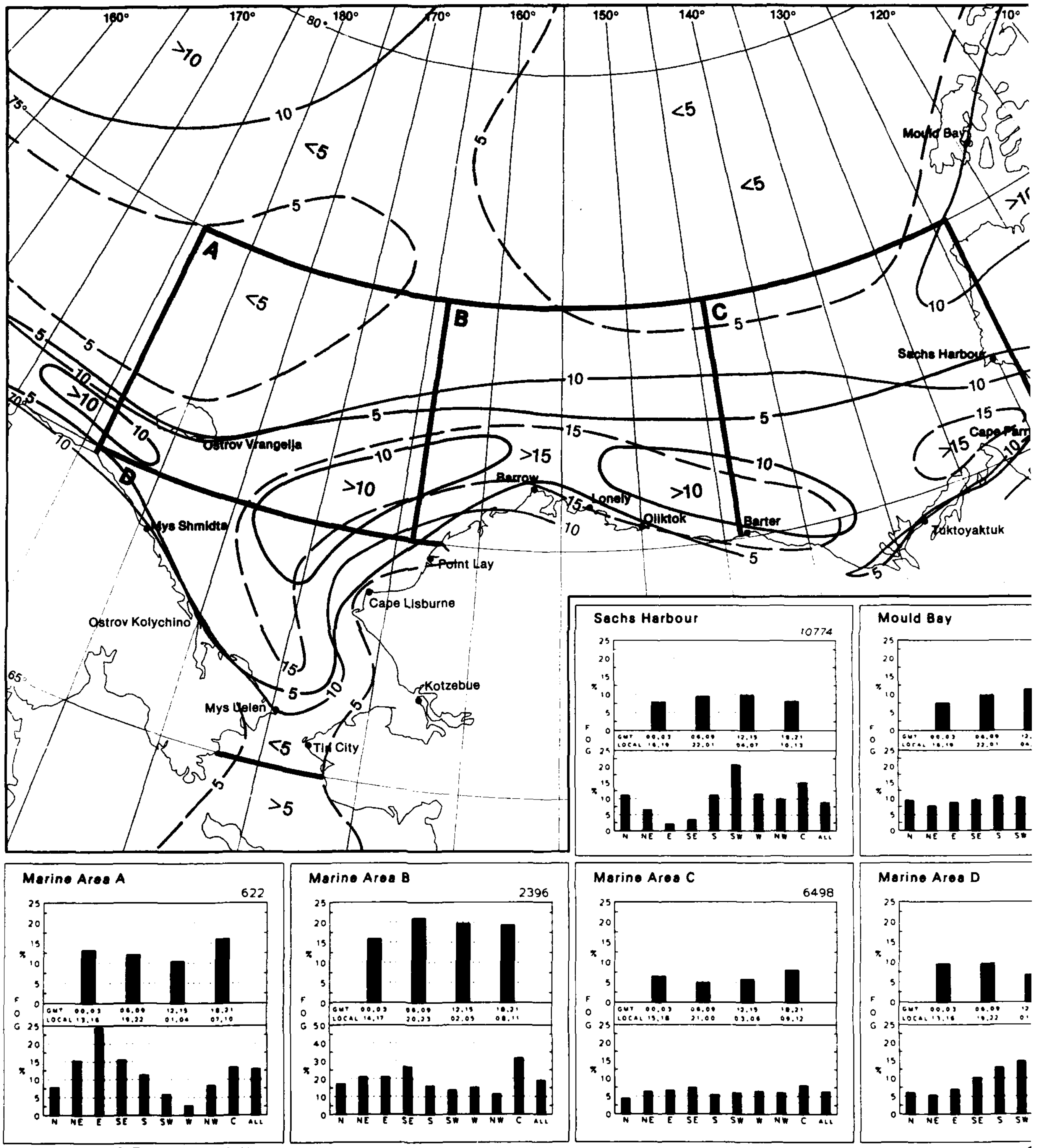


September

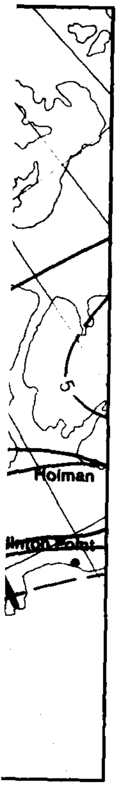
15 Fog-Time and Fog-Wi

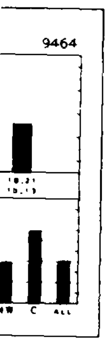


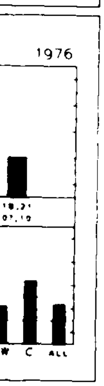
Direction



15 Fog and Poor Visibility

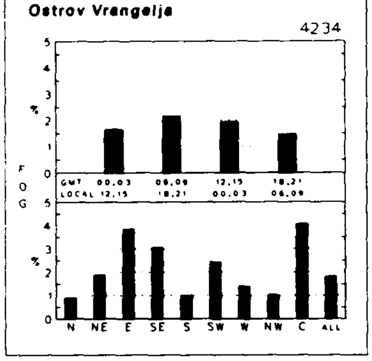




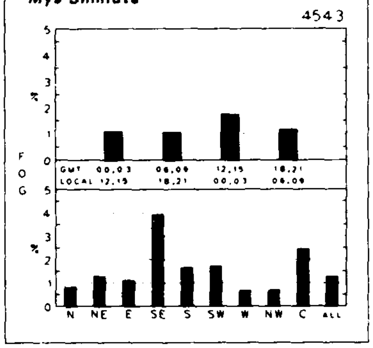


tember

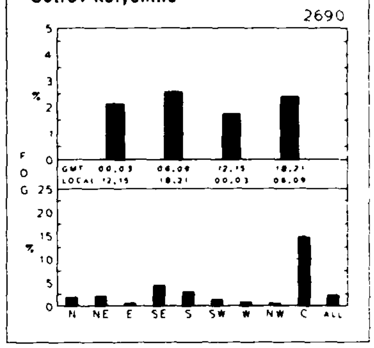
Ostrov Vrangelja



Mys Shmidta



Ostrov Kolychino



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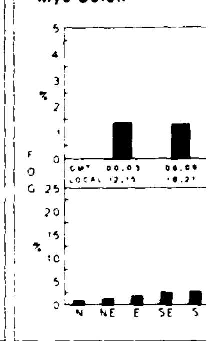
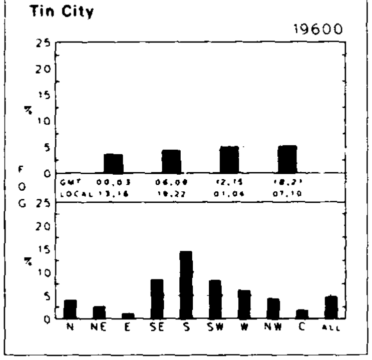
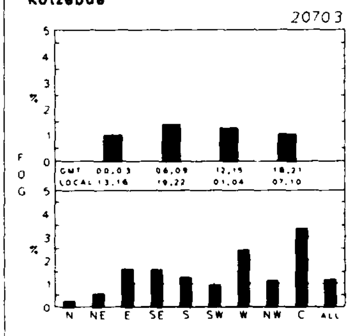


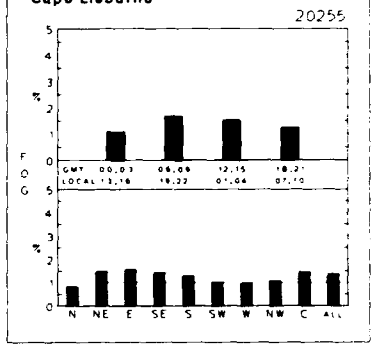
Tin City



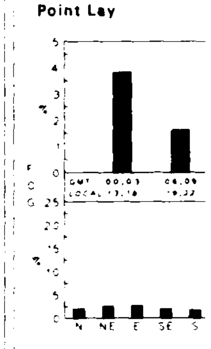
Kotzebue



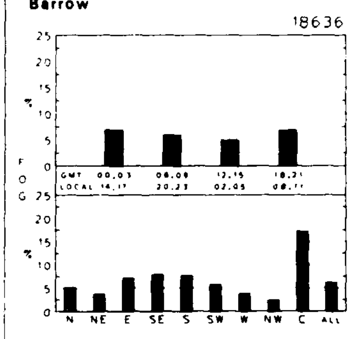
Cape Lisburne



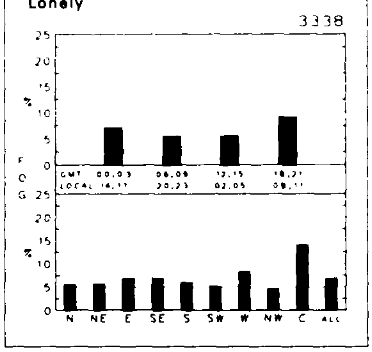
Point Lay



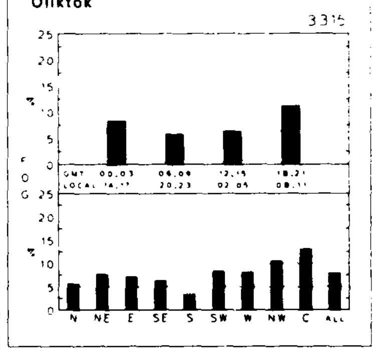
Barrow



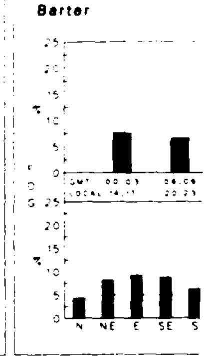
Lonely



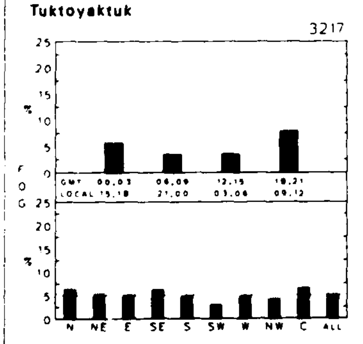
Oliktok



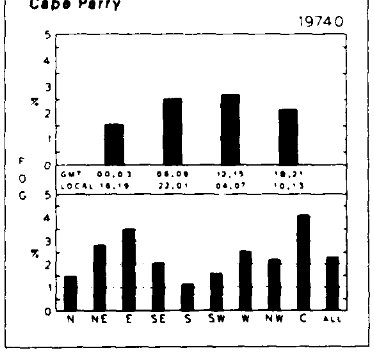
Barter



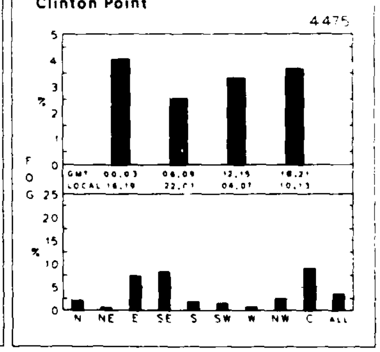
Tuktoyaktuk



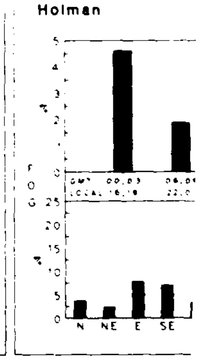
Cape Perry



Clinton Point

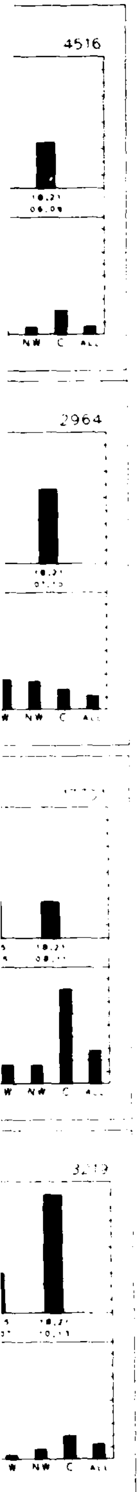


Holman

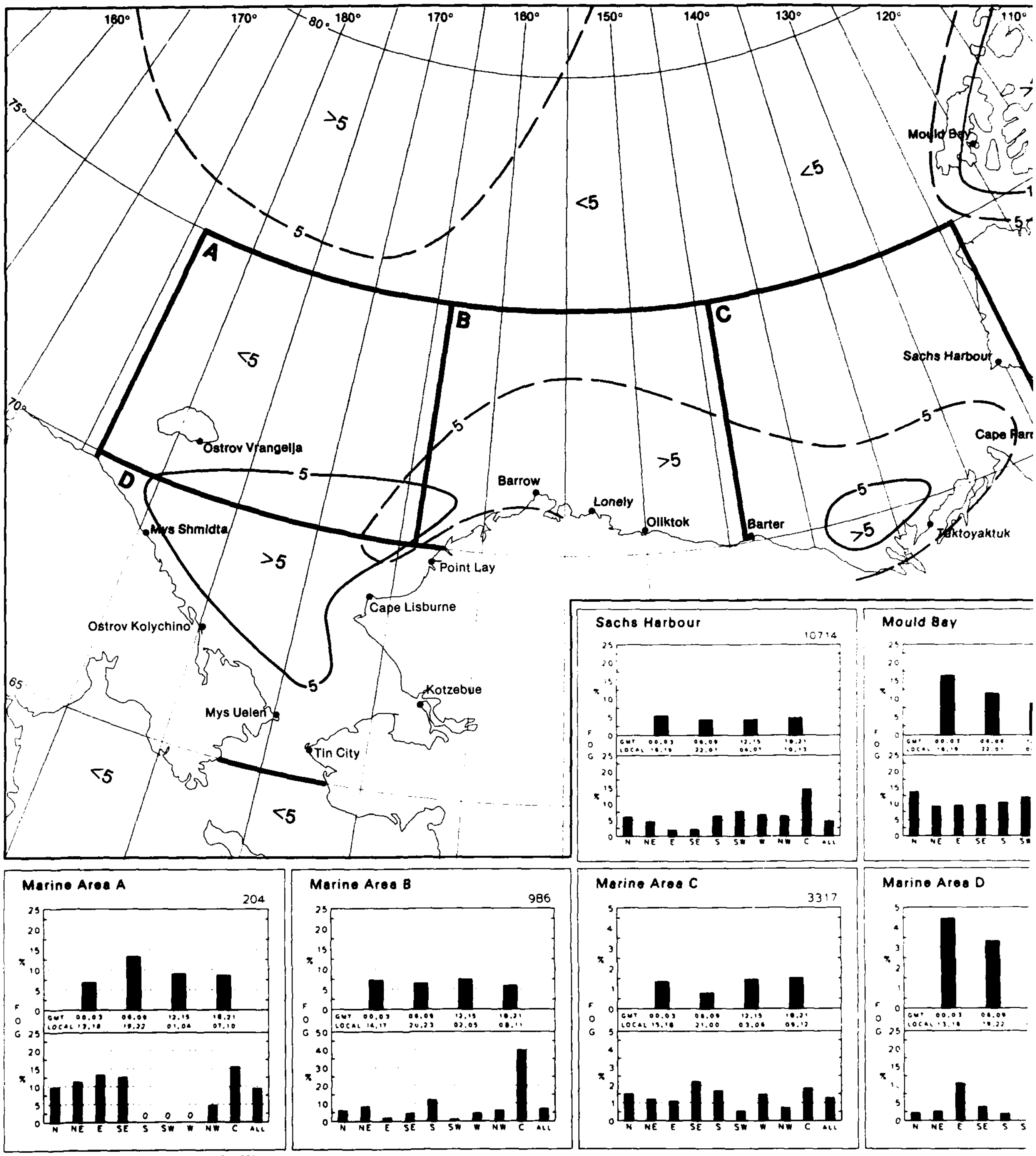


October

15 Fog-Time and Fog-

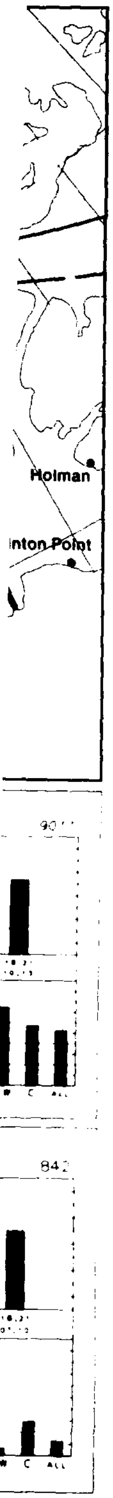


l Direction



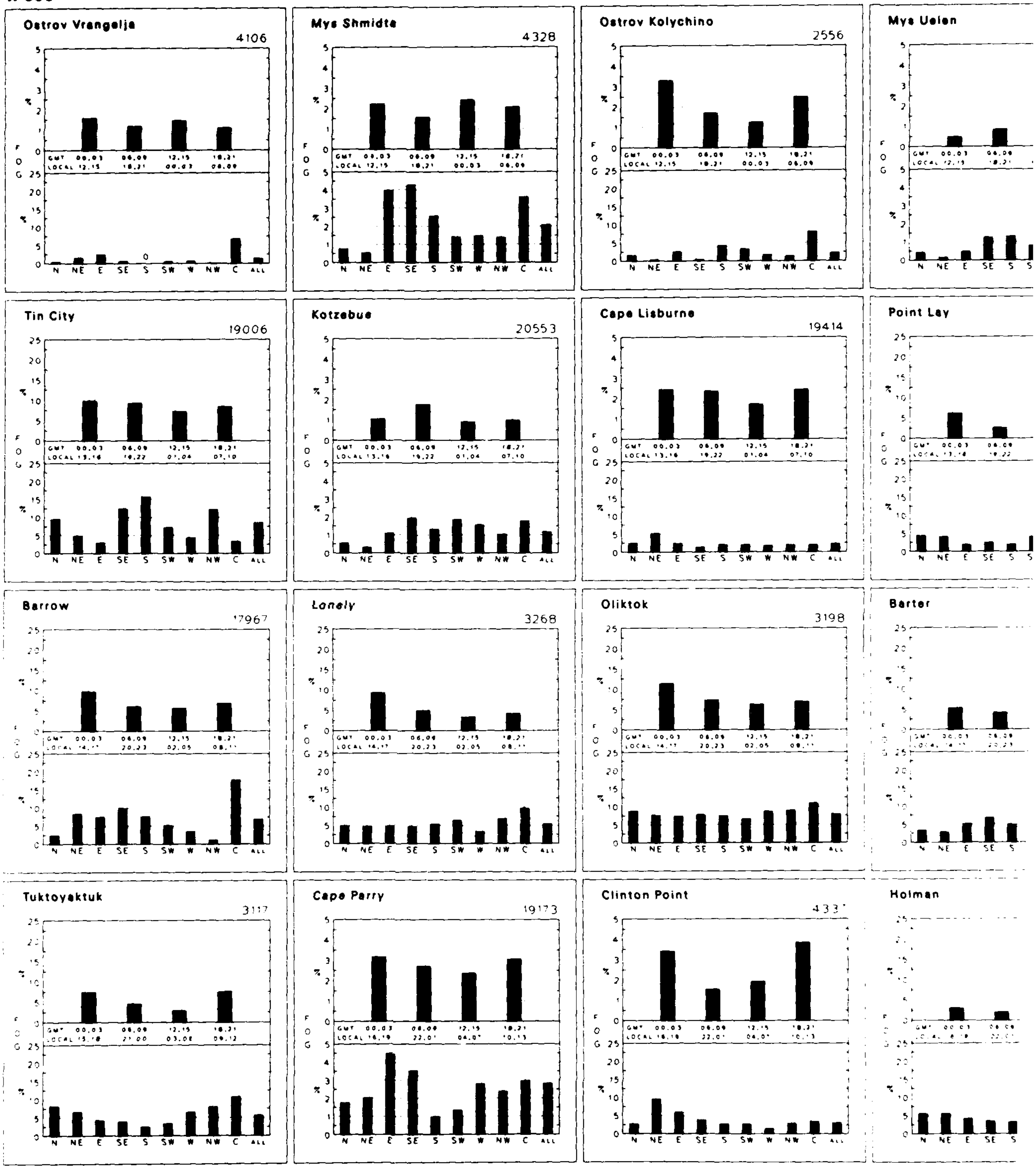
15 Fog and Poor Visibility

II-389



October

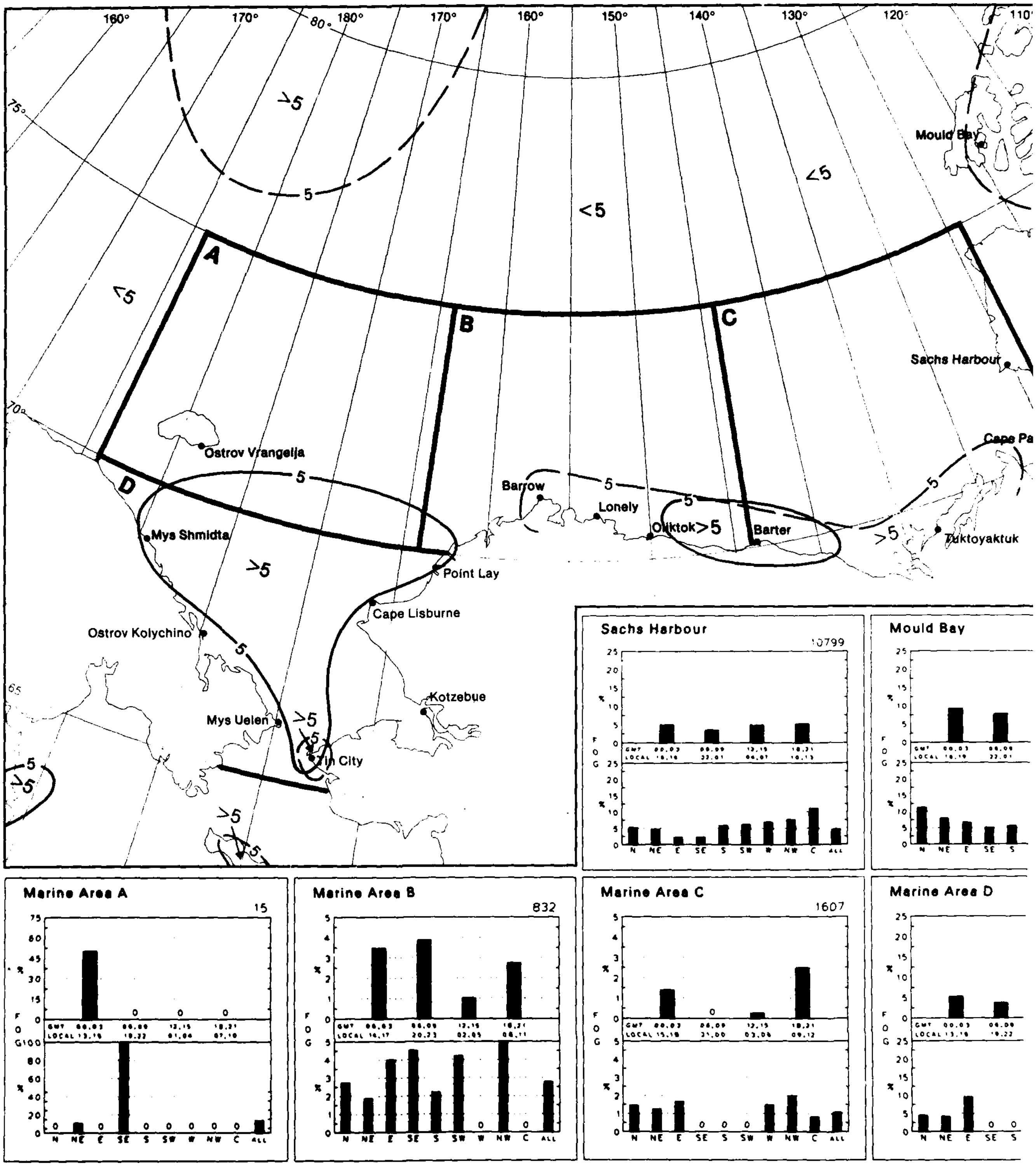
II-390



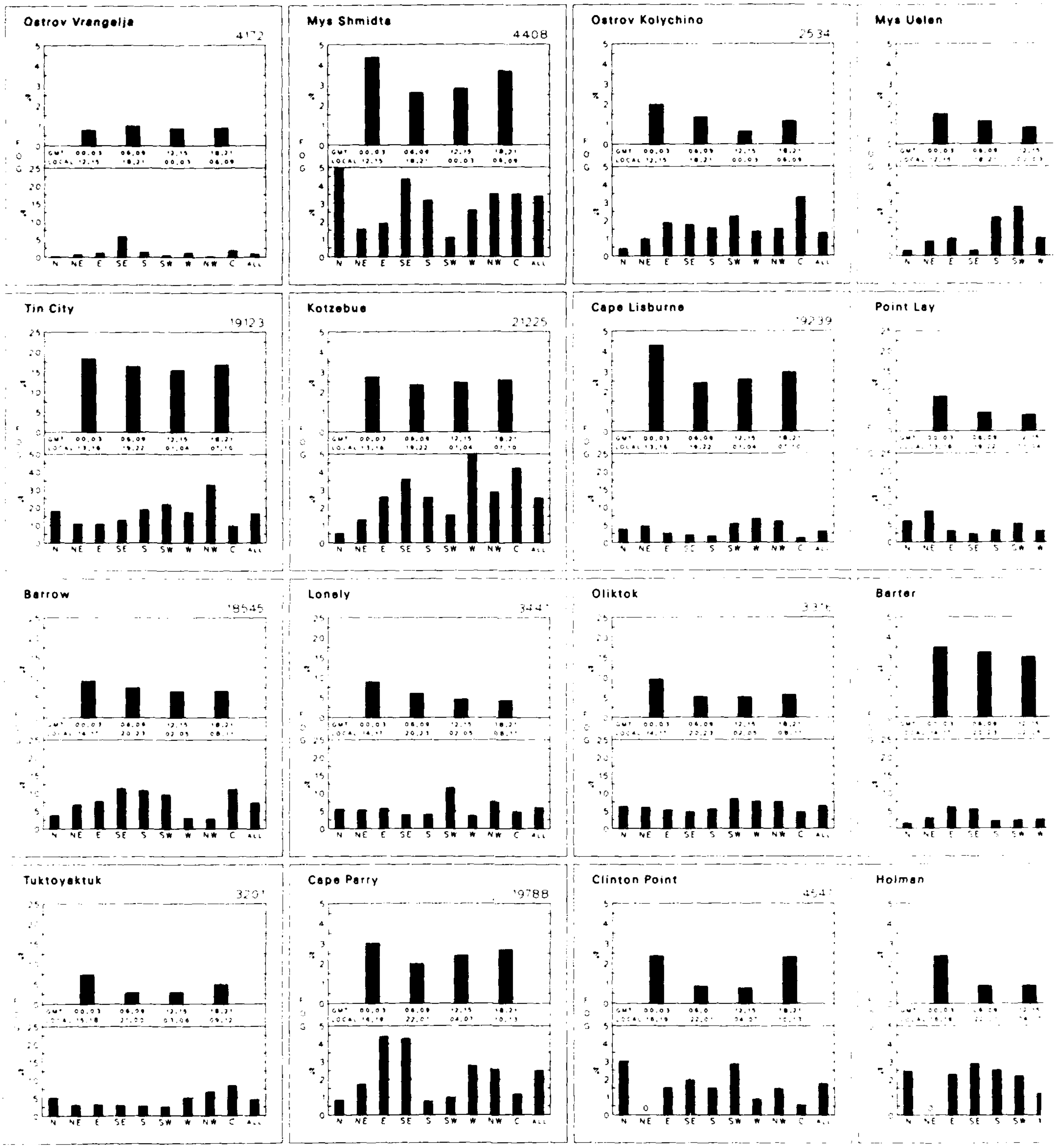
November

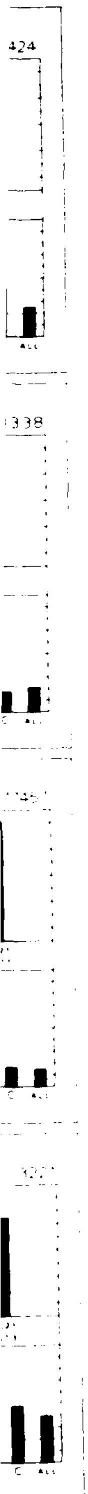
15 Fog-Time and Fog-W

Direction



15 Fog and Poor Visibility


Ostrov Vrangelja
Mys Shmidta
4408
Ostrov Kolychino
2534
Mys Uelen
Tin City
19123
Kotzebue
21225
Cape Lisburne
19239
Point Lay
Barrow
18545
Lonely
Oliktok
Barter
Tuktoyaktuk
Cape Parry
19788
Clinton Point
Holman
GMT 00,03 06,09 12,15 18,21
LOCAL
FOG
%
N NE E SE S SW W NW C ALL



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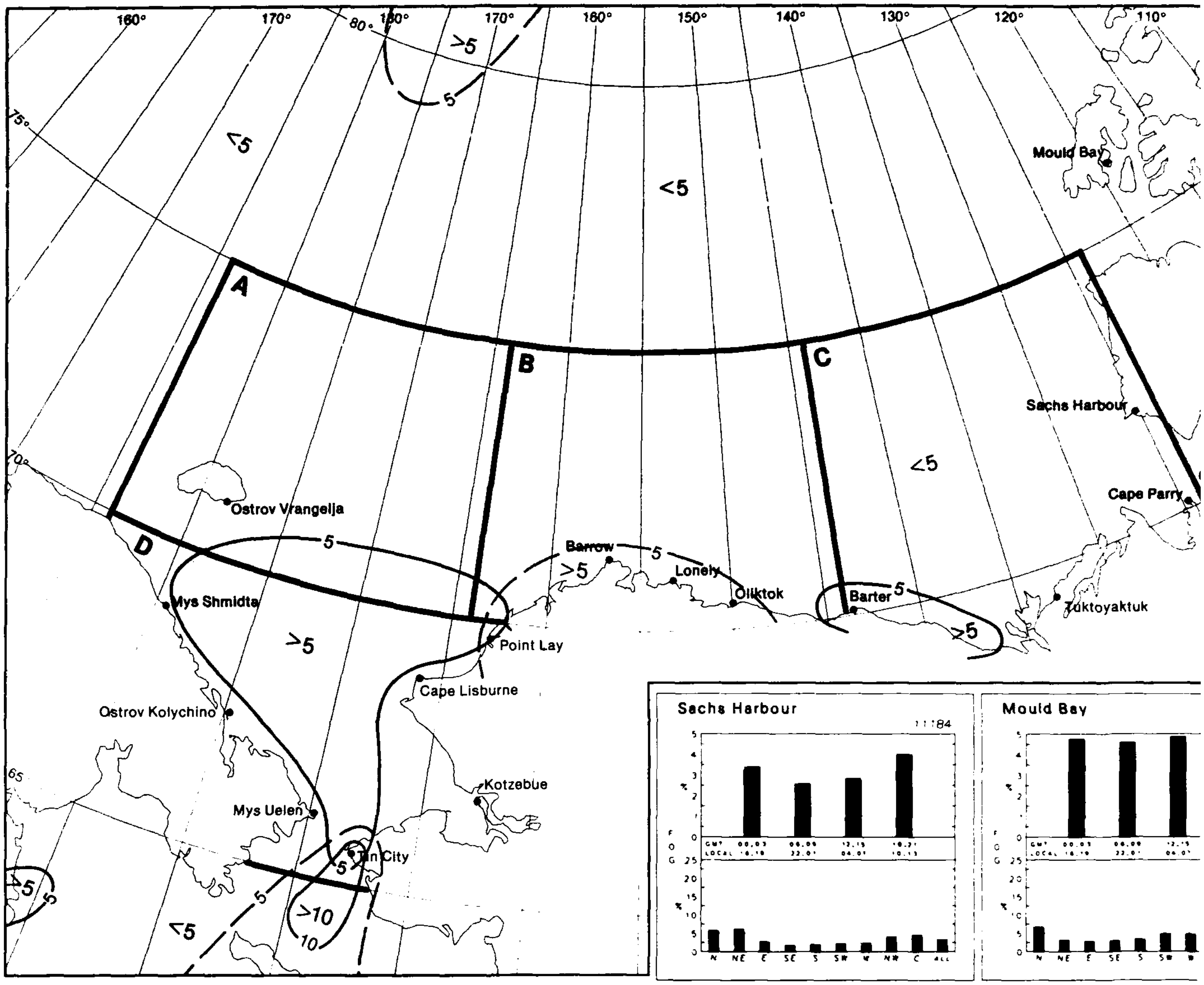
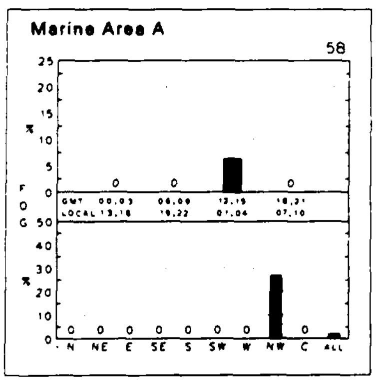
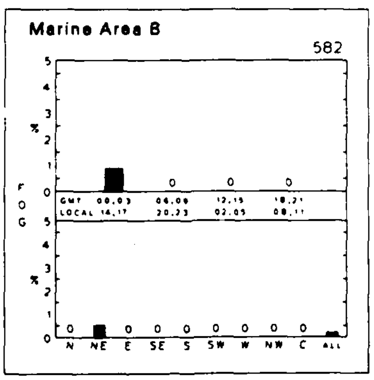
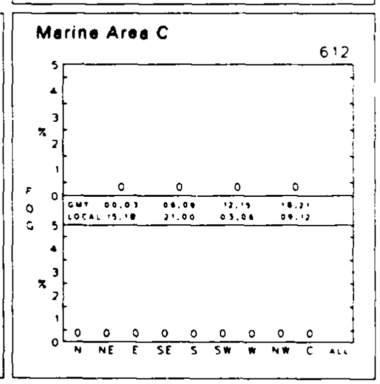
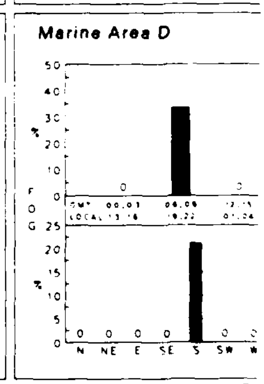










15 Fog and Poor Visibility

D

Map 16. Sea surface temperature extremes (°C)

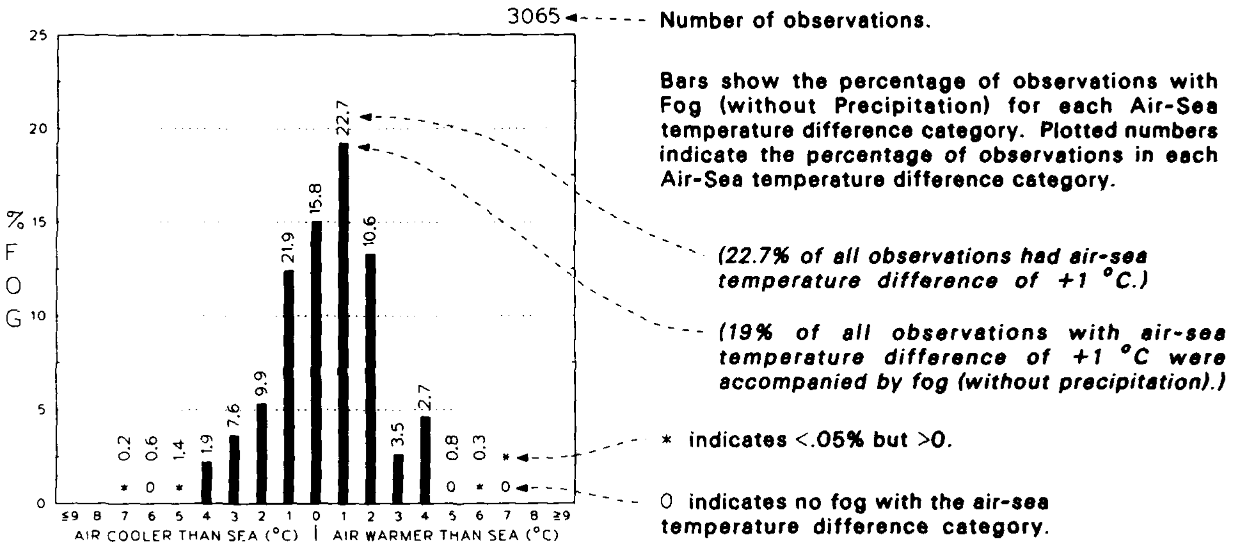
BLACK LINE – Maximum (99%) sea surface temperature (1% of the temperatures were great than the given value).

BLUE LINE – Minimum (1%) sea surface temperature (1% of the temperatures were equal to less than the given value).

Albers Equal–Area Conic Projection

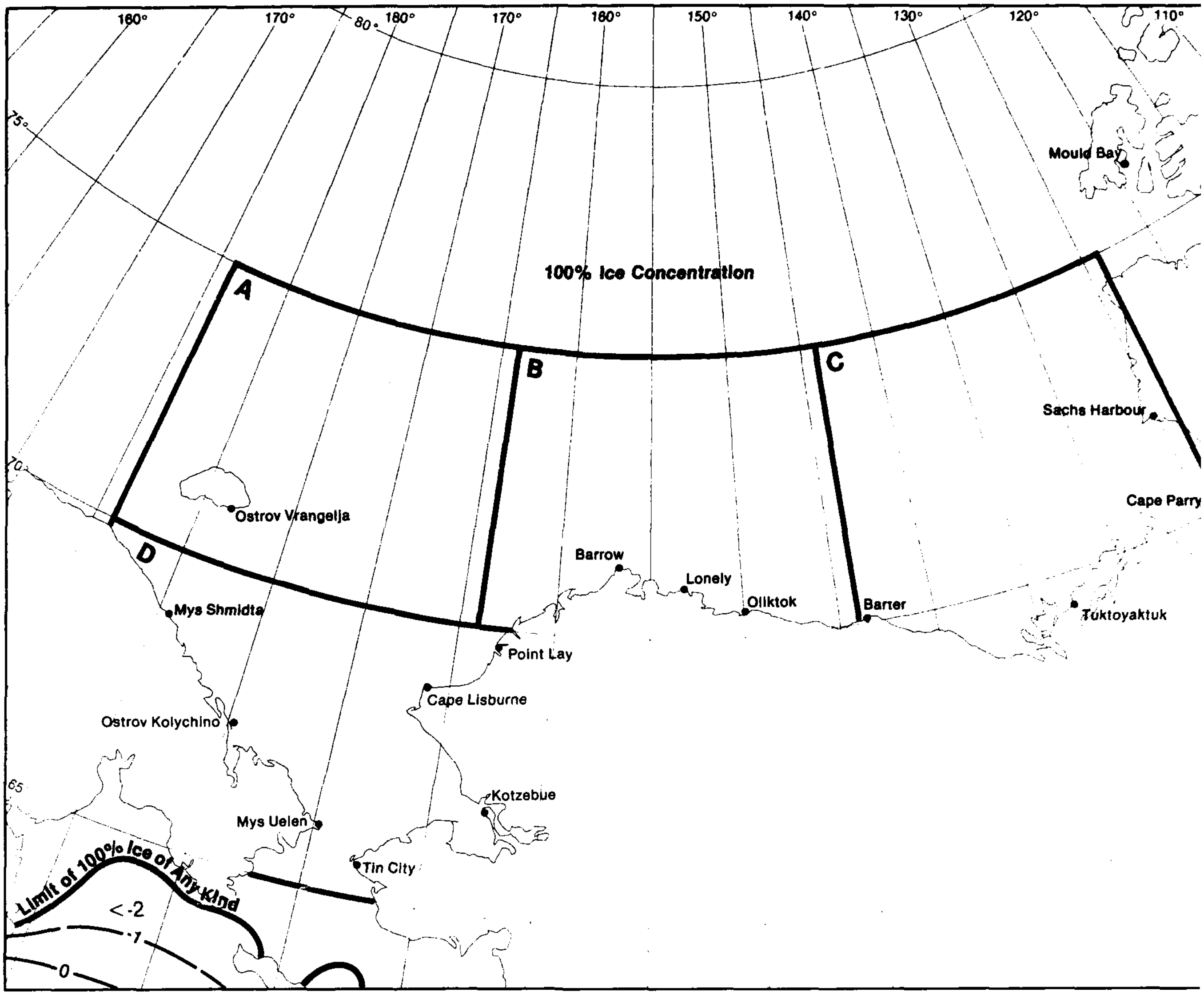
Graphs: Fog/air-sea temperature difference

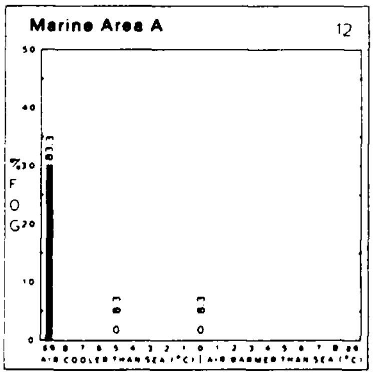
PERCENT FREQUENCY OF THE OCCURRENCE OF FOG (Without Precipitation) VERSUS AIR-SEA TEMPERATURE DIFFERENCE (°C)

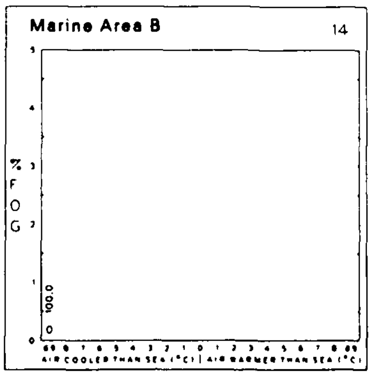


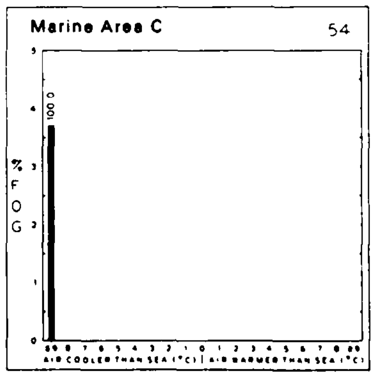
Sea surface temperatures are recorded with a fairly high frequency in marine observations. The principal method ving the temperature of the water surface on merchant ships are by either a fluid thermometer located in the condens the ship or a thermometer immersed in a freshly-drawn bucket of surface water. While the intake method is commor most merchant ships today, the bucket method was the most common a half century ago. Injection temperatures a sidered as representative of the surface temperature as bucket readings because the injectors are commonly located the water surface at depths of 5 to 20 meters depending on the size of the ship. Injection temperatures are also subjec errors due to heating caused by the ship. Bucket temperatures can also be biased by the air temperature or the bu

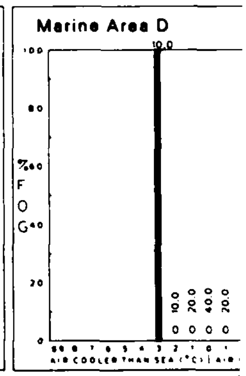
Even though the two methods produce slightly different results, the data can be used with considerable confi isopleths representing extreme conditions show the maximum (99%) and the minimum (1%) levels of sea surface te Gradients and relative values of the isopleths are considered reliable.





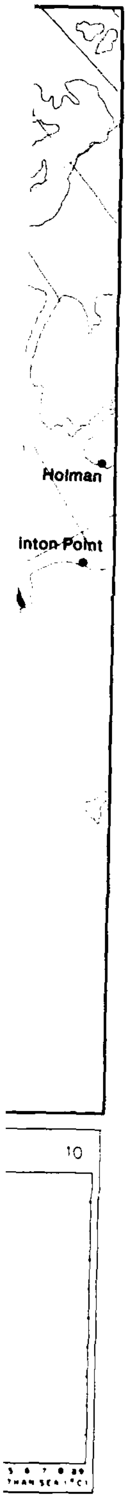






January

16 Fog and Air-Sea Temperature I
Sea Surface Temperature Extr



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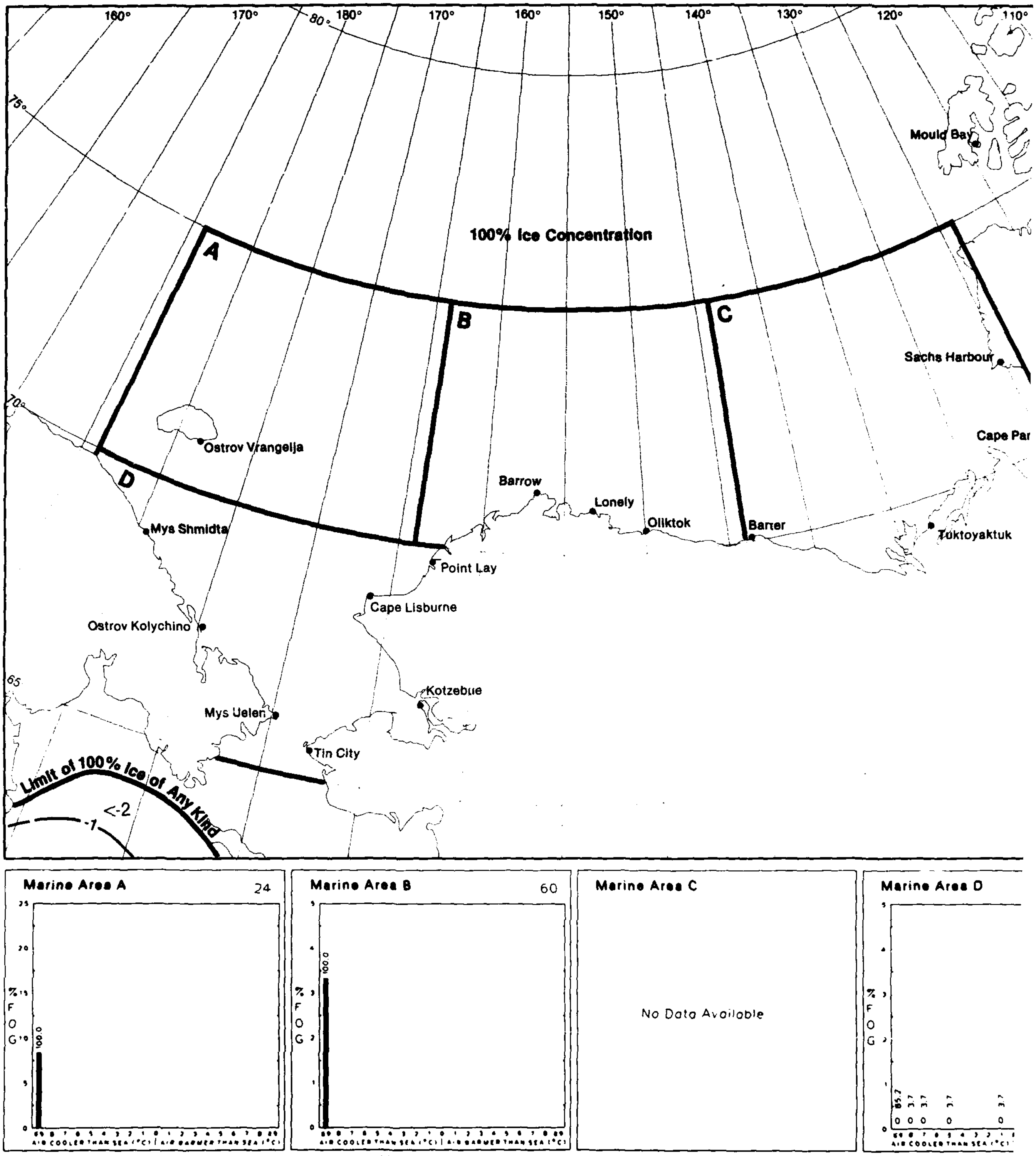
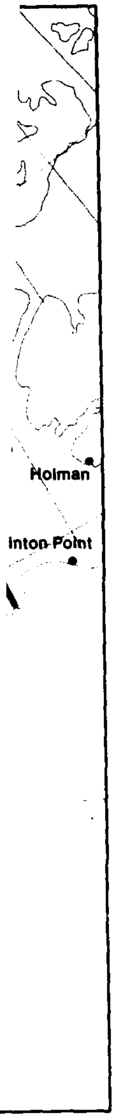
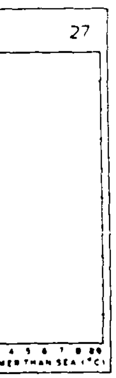
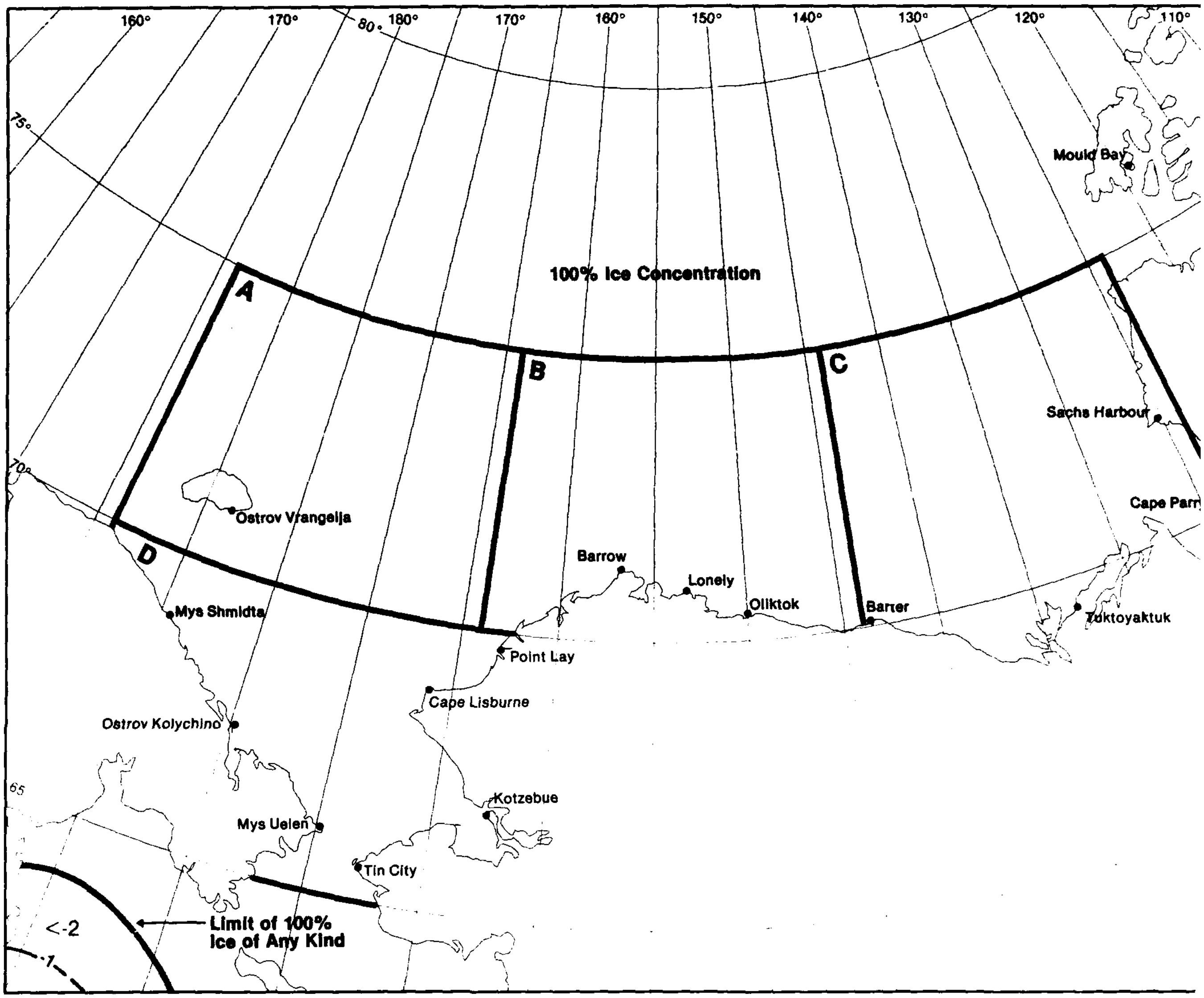


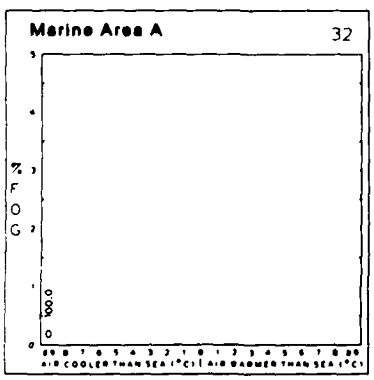
16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

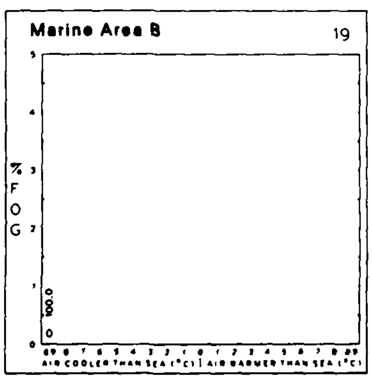




February

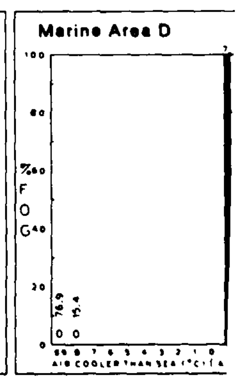






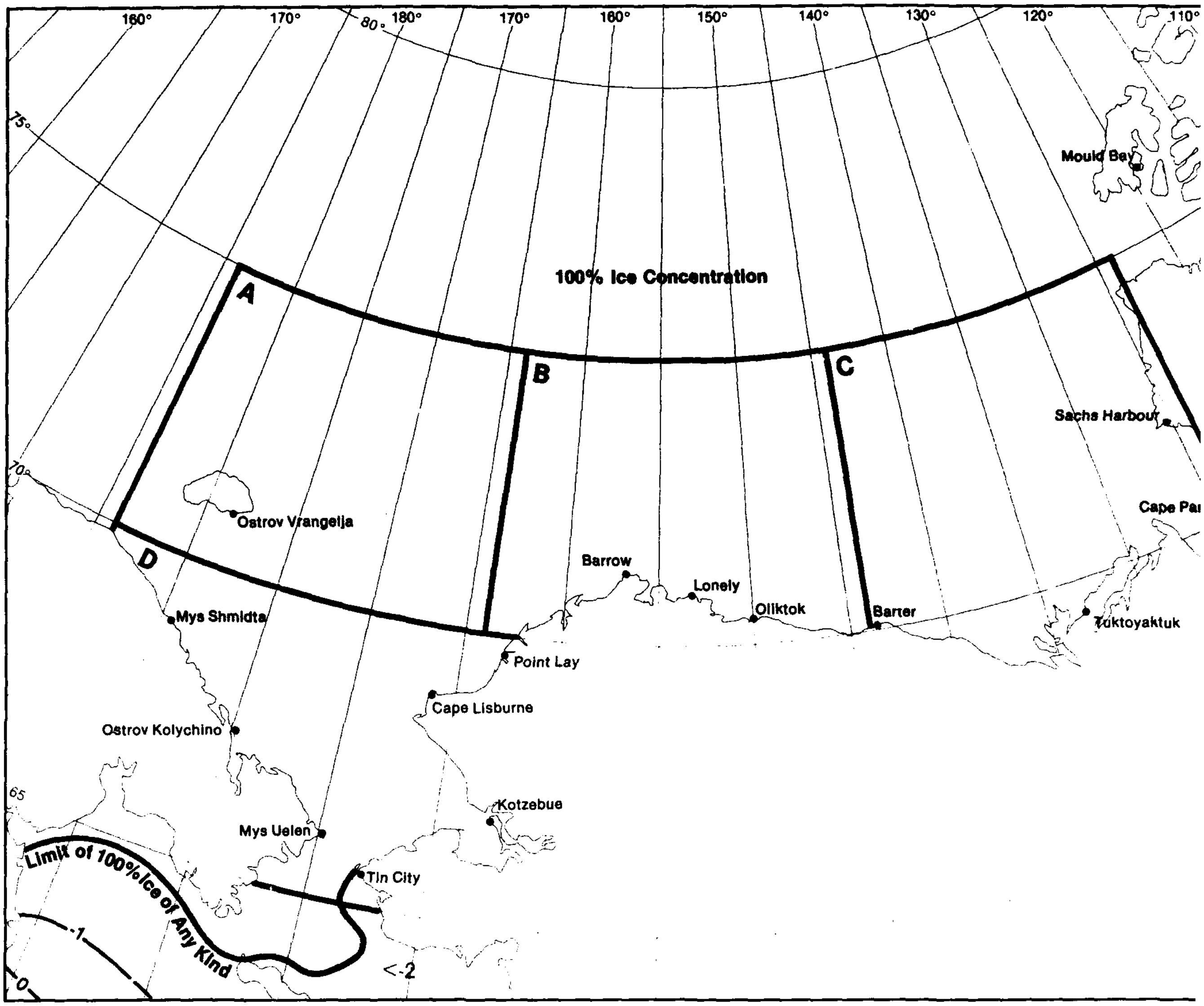
Marine Area C

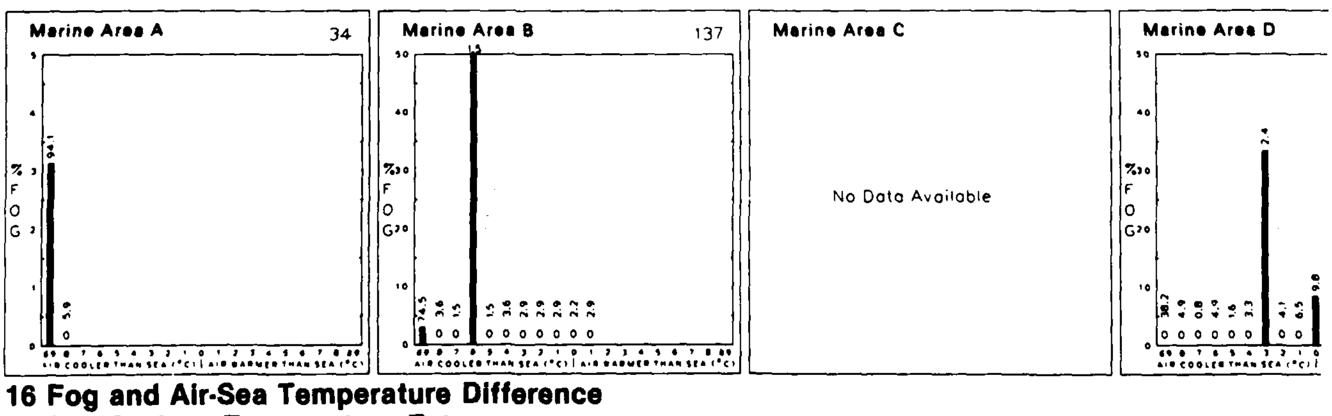
No Data Available



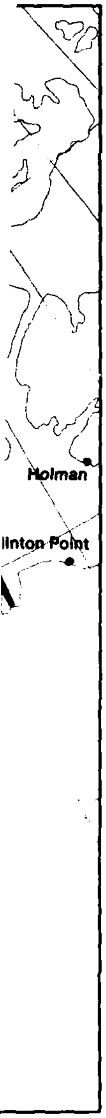
March

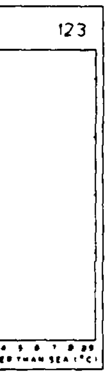
16 Fog and Air-Sea Temperature
Sea Surface Temperature Ext



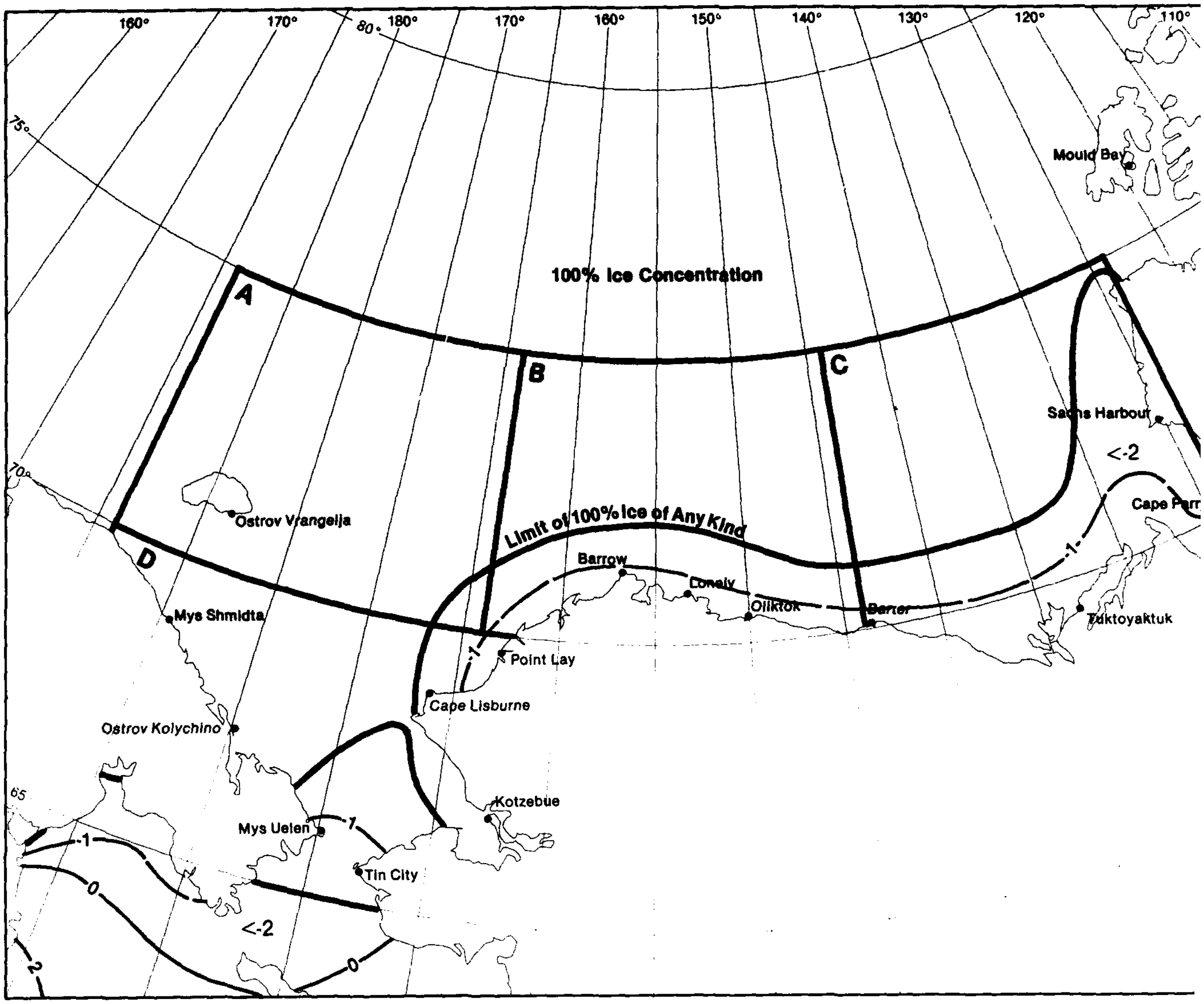


16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

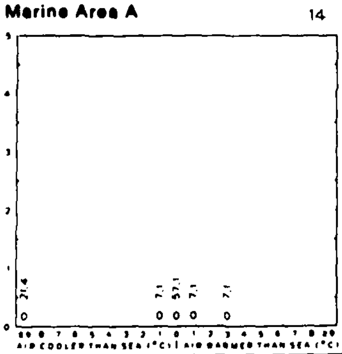




April



Marine Area A



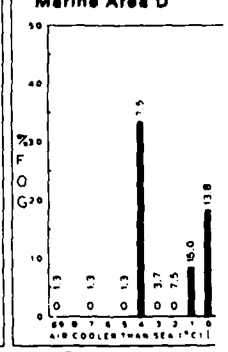
Marine Area B

No Data Available

Marine Area C

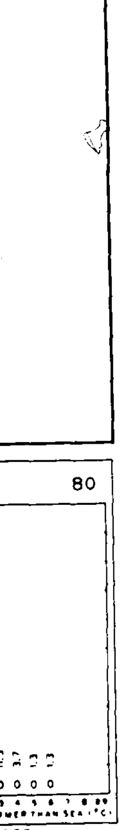
No Data Available

Marine Area D



May

16 Fog and Air-Sea Temperatur
Sea Surface Temperature Ex



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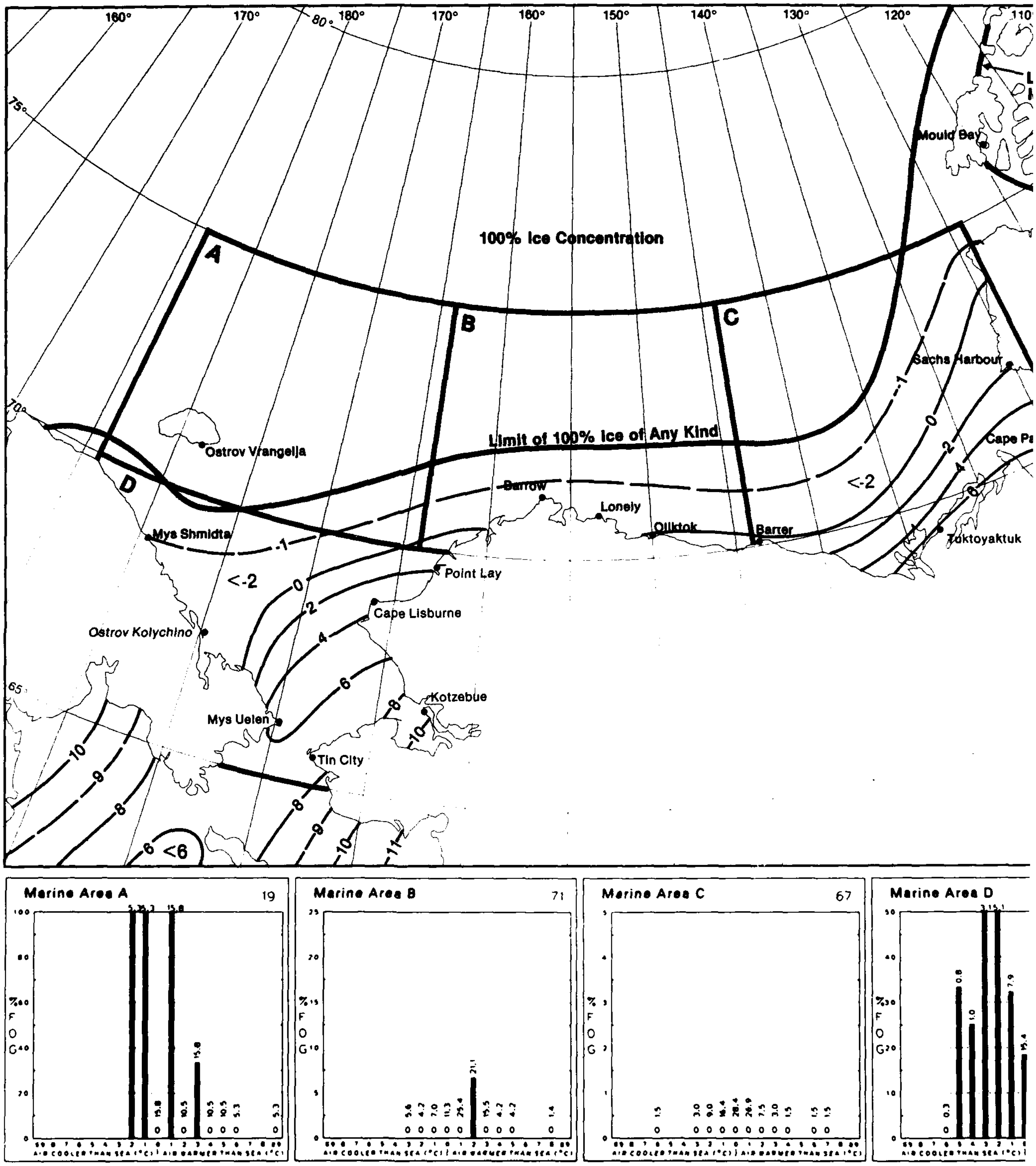
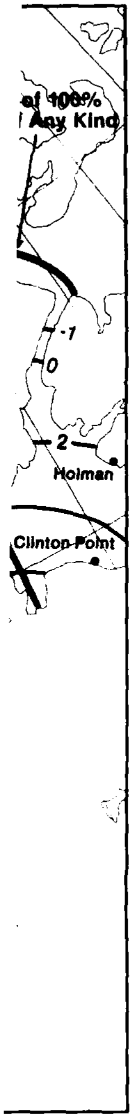


**16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes**



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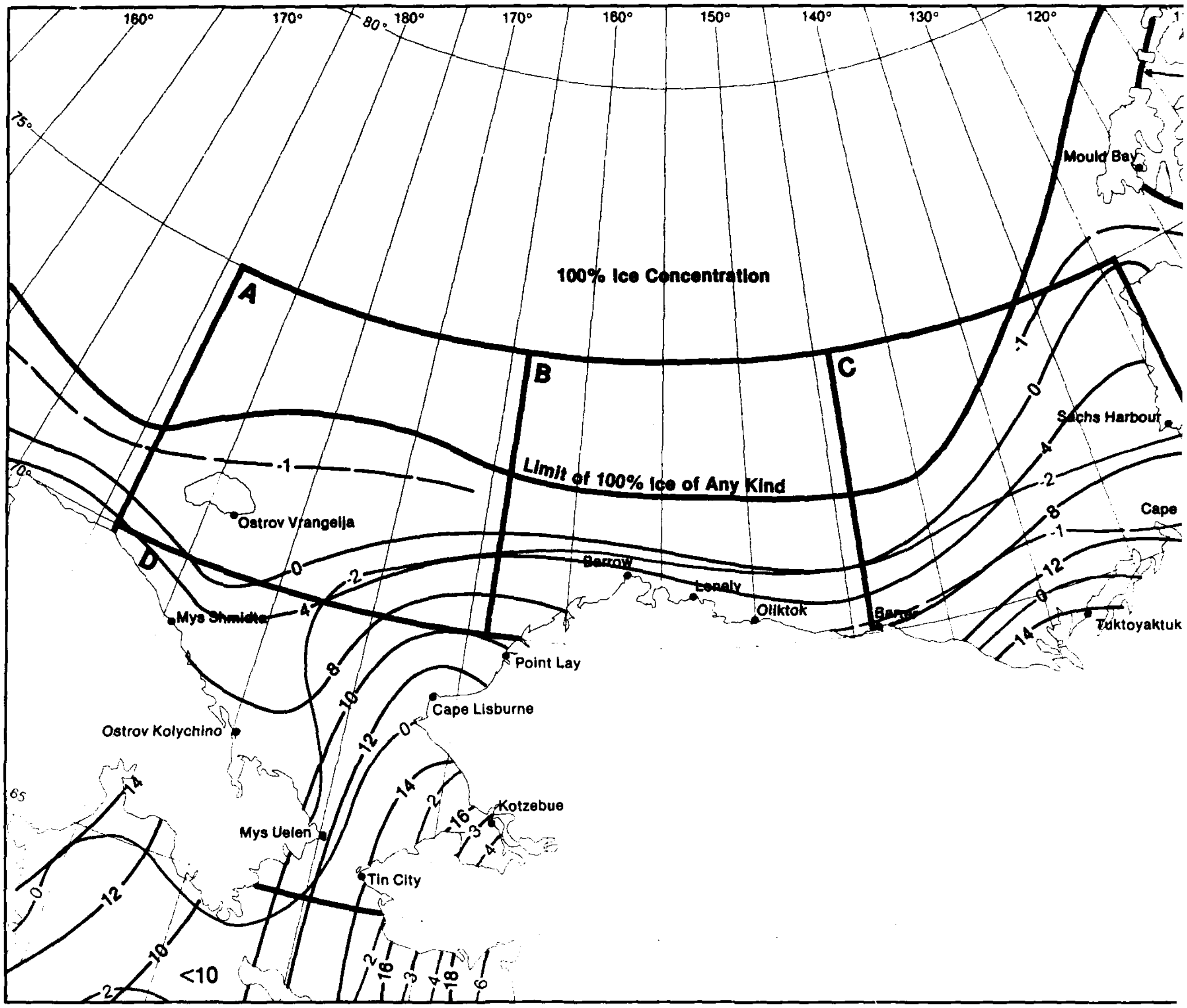
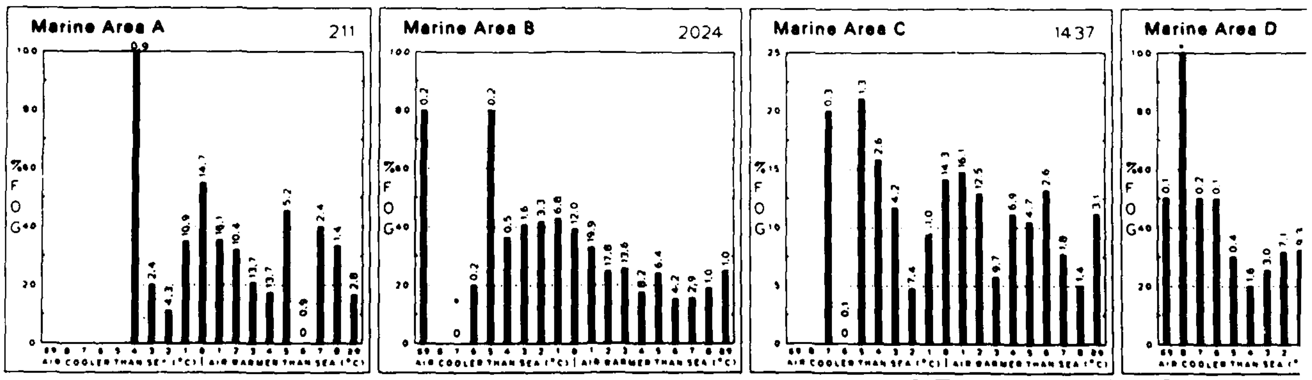
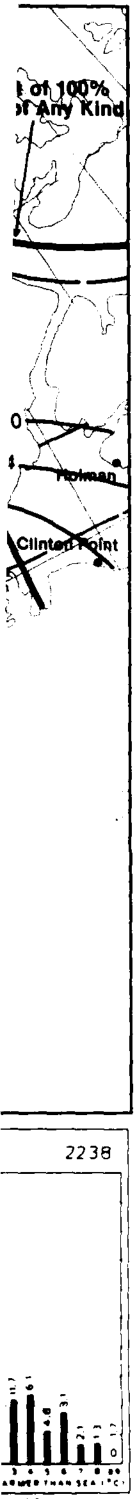
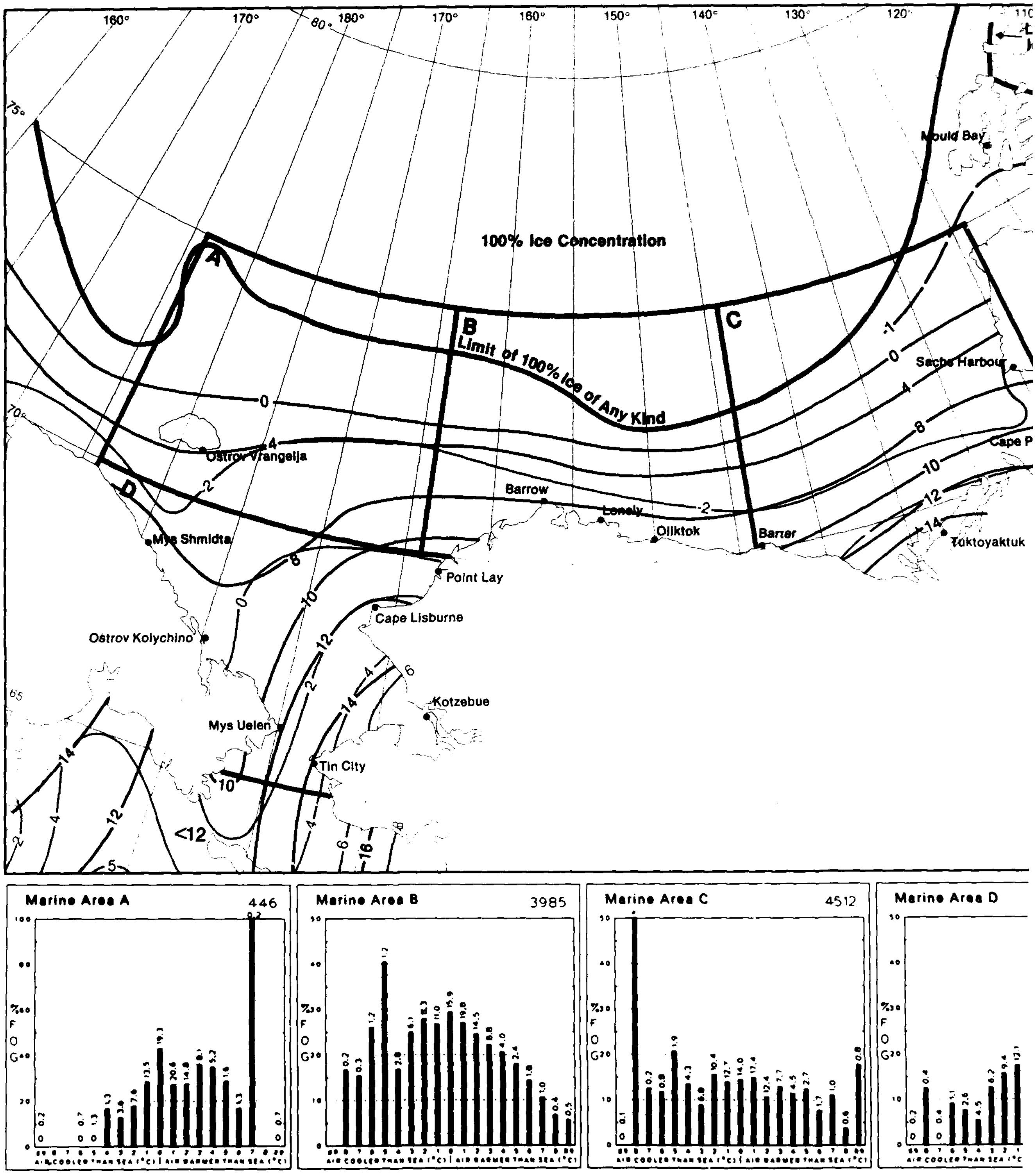




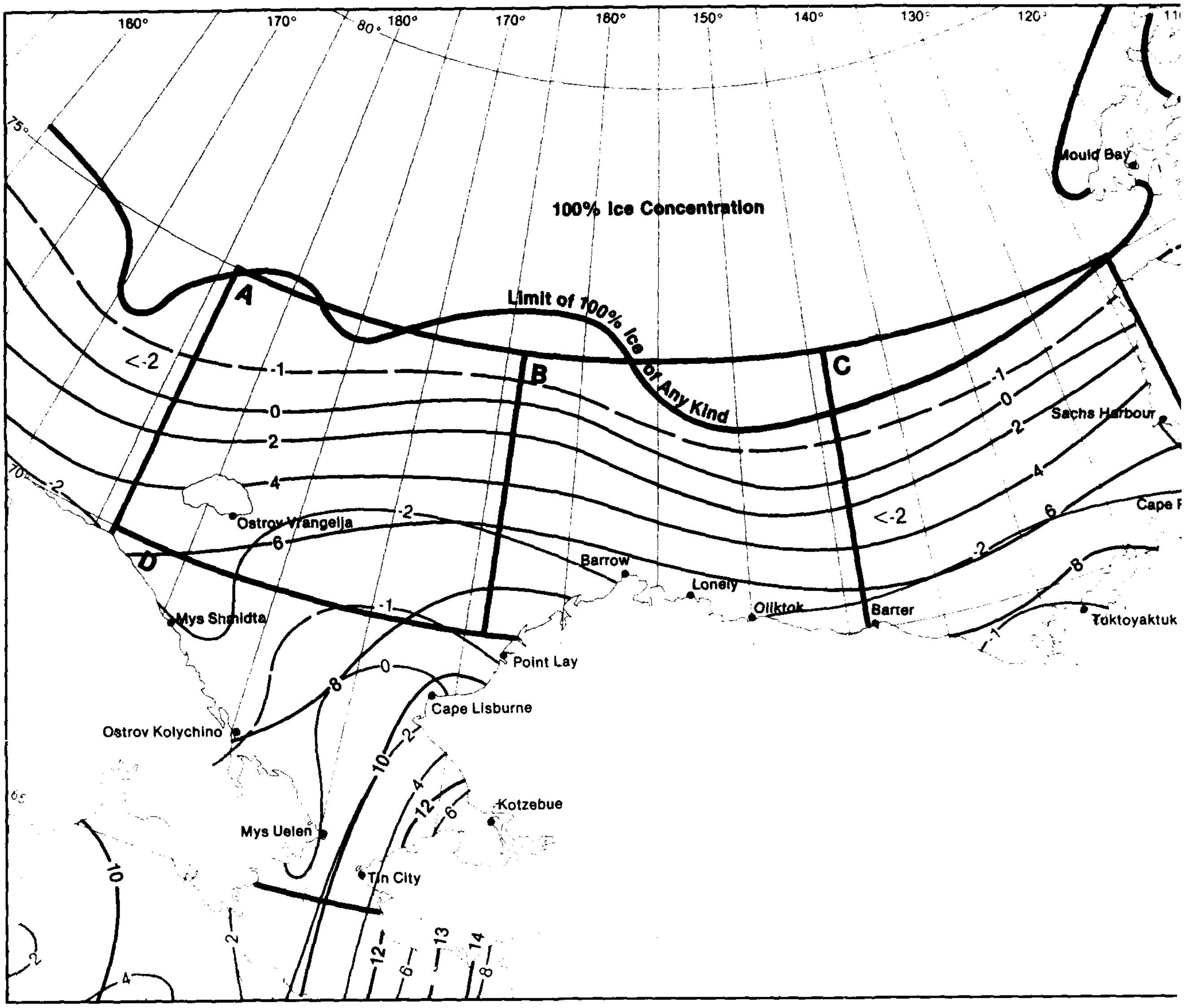
July

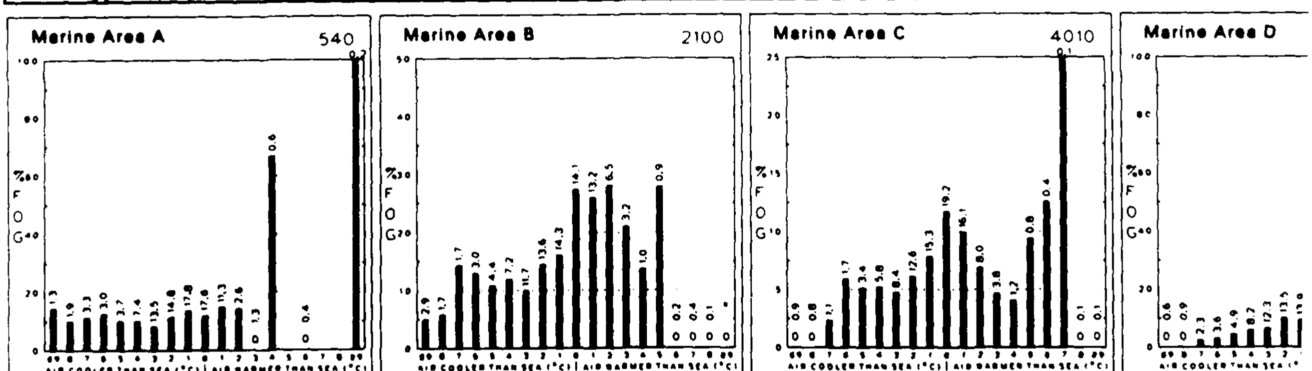
16 Fog and Air-Sea Temperat
Sea Surface Temperature





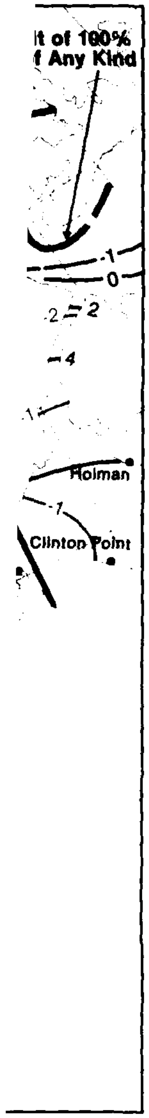
16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

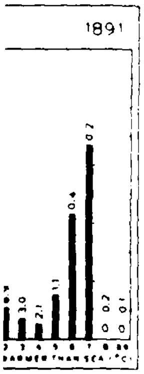


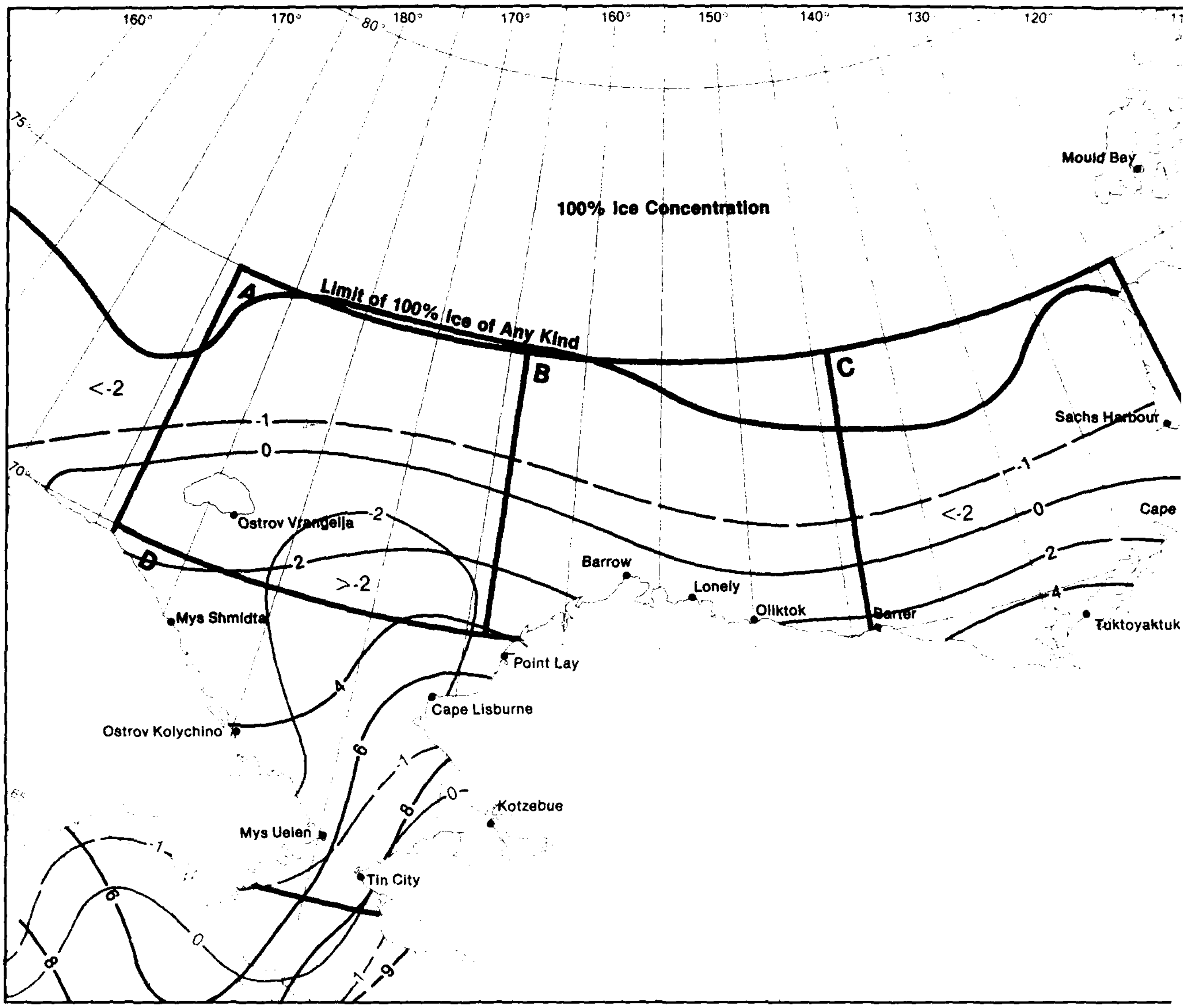


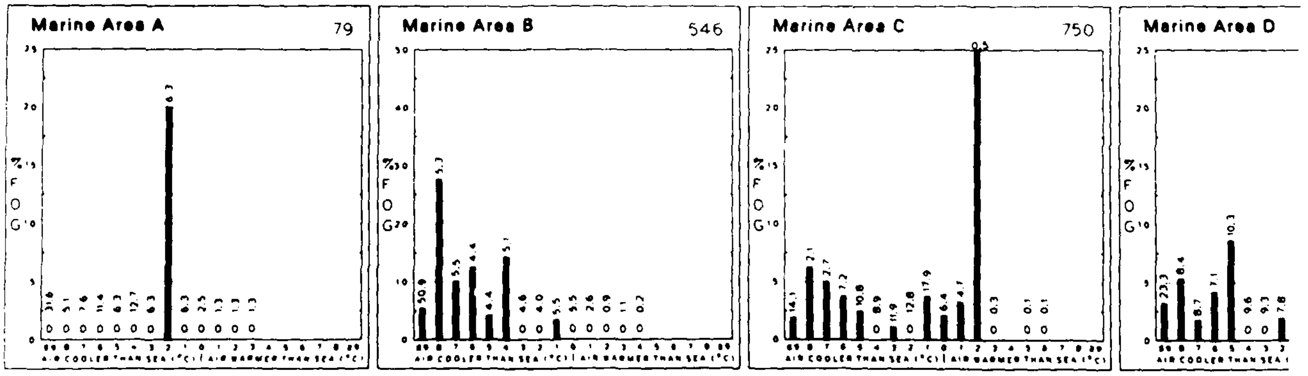
September

16 Fog and Air-Sea Temperatu
Sea Surface Temperature I

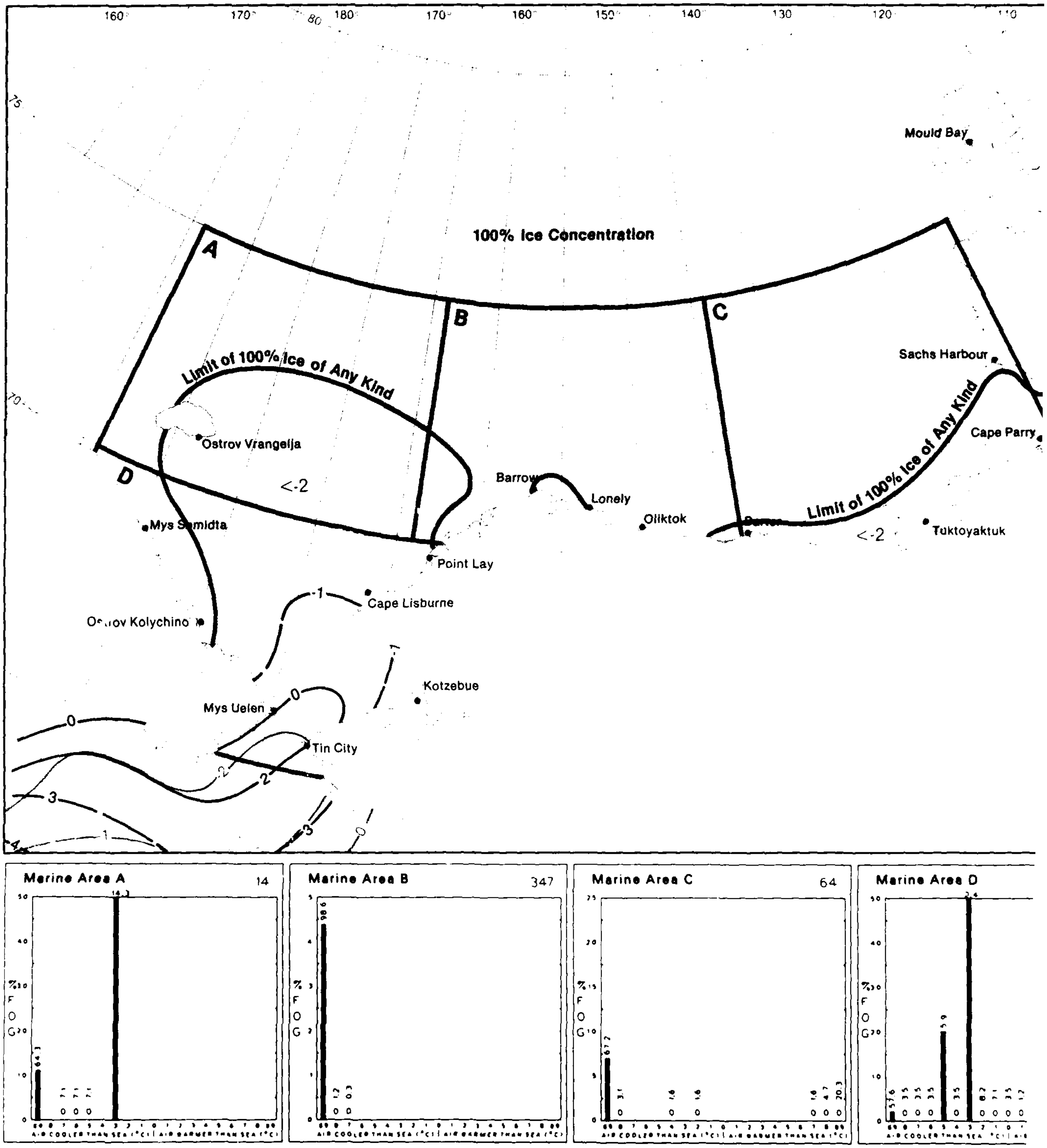








16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes



November

16 Fog and Air-Sea Temperature
Sea Surface Temperature Ext

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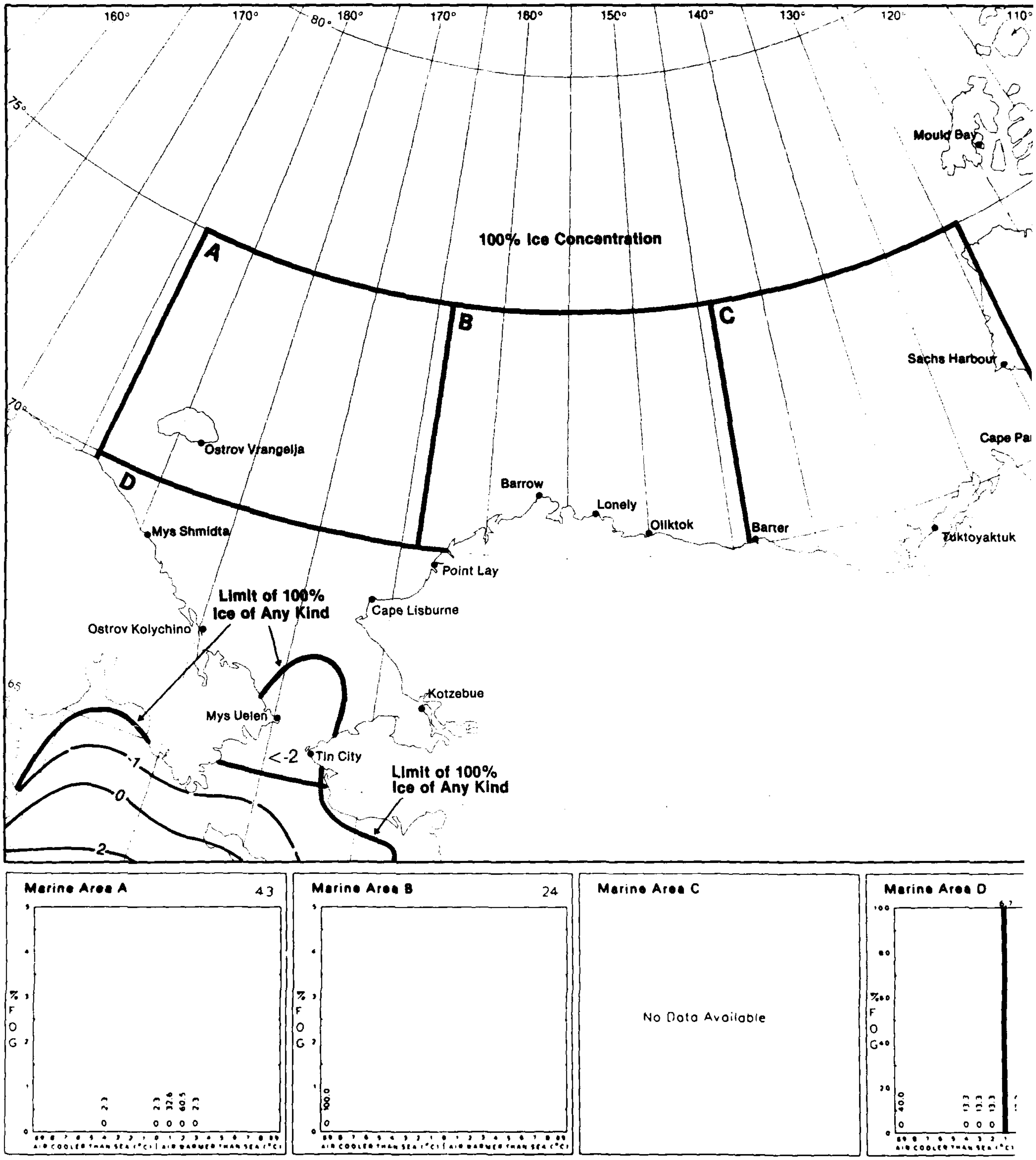


16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

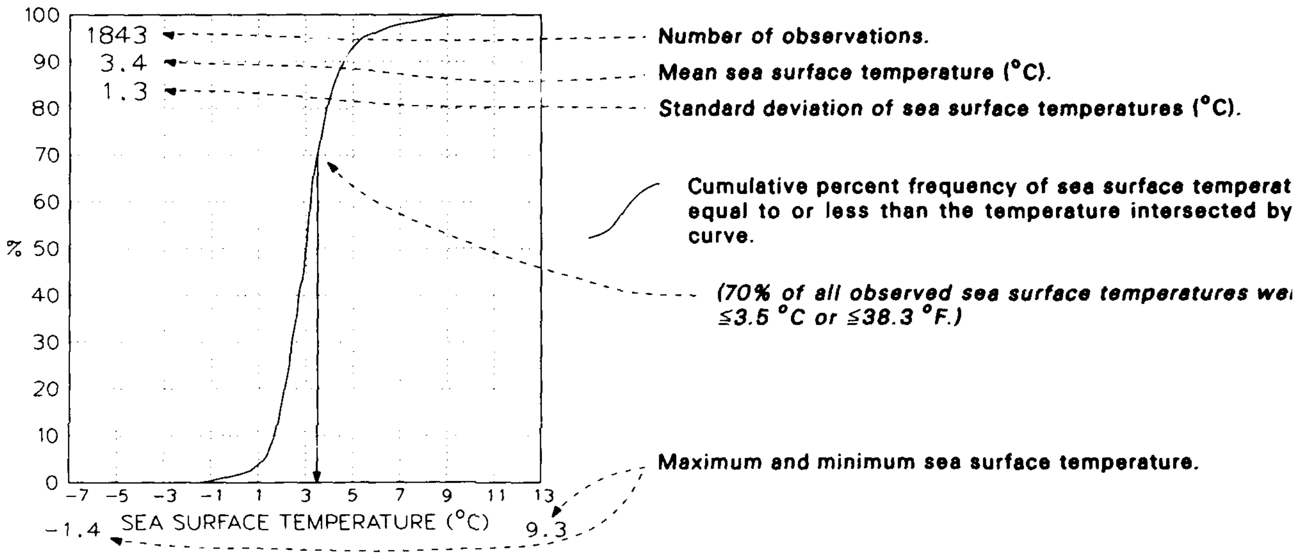
Map 17. Mean sea surface temperature and ice concentration of any kind.

BLACK LINE – Mean sea surface temperature (°C).

BLUE LINE – Percent frequency of occurrence of ice of any kind.

Albers Equal–Area Conic Projection

Graphs: Sea surface temperature



The percentage of temperatures greater than a given value can be obtained from the graph by subtracting the c frequency of that value from 100%. Sea surface temperatures may be used to estimate the length of time a person i clothes and life preserver may be expected to survive if washed overboard. The approximate survival time as a functic temperature is shown in the following table (refer to the text in Section I of the atlas for information on immersion hy| and to the introductory text in Section II for sea ice information).

Water Temperature	Exhaustion or Unconsciousness	Expected time of Survival
0°C	15 min	15—45 min
0°—5°C	15—30 min	30—90 min
5°—10°C	30—60 min	1—3 hours
10°—15°C	1—2 hours	1—6 hours
15°—20°C	2—7 hours	2—40 hours
20°—25°C	3—12 hours	3—indefinite hrs
25°C	Indefinite	Indefinite

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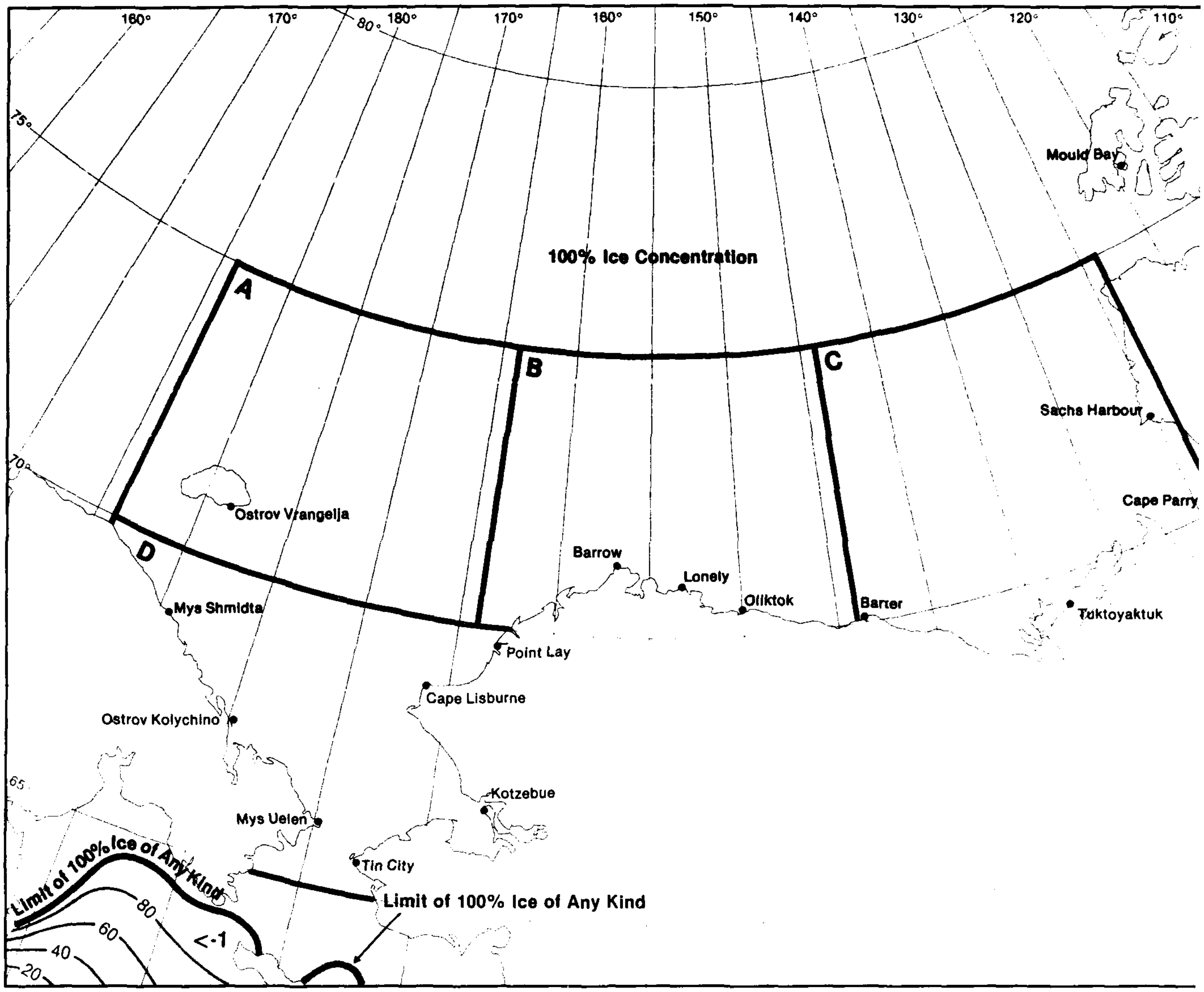
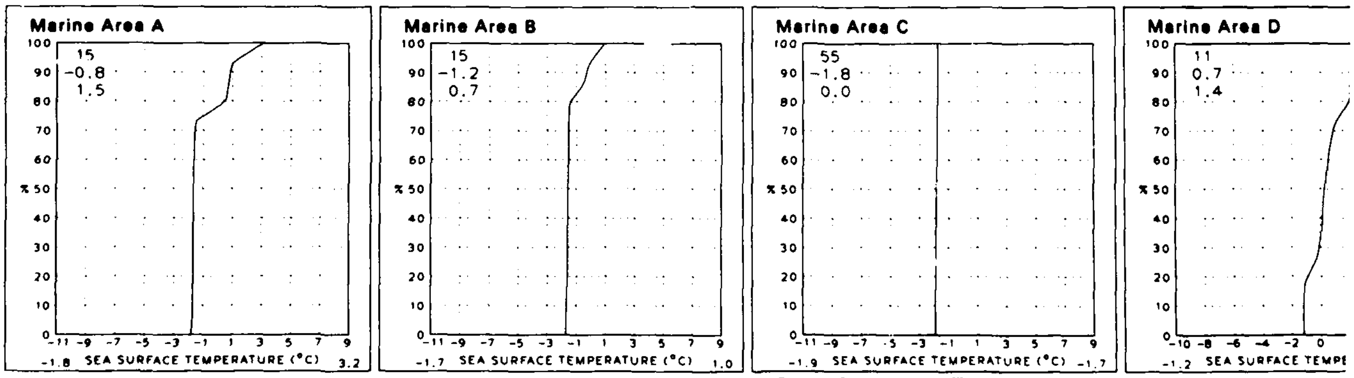
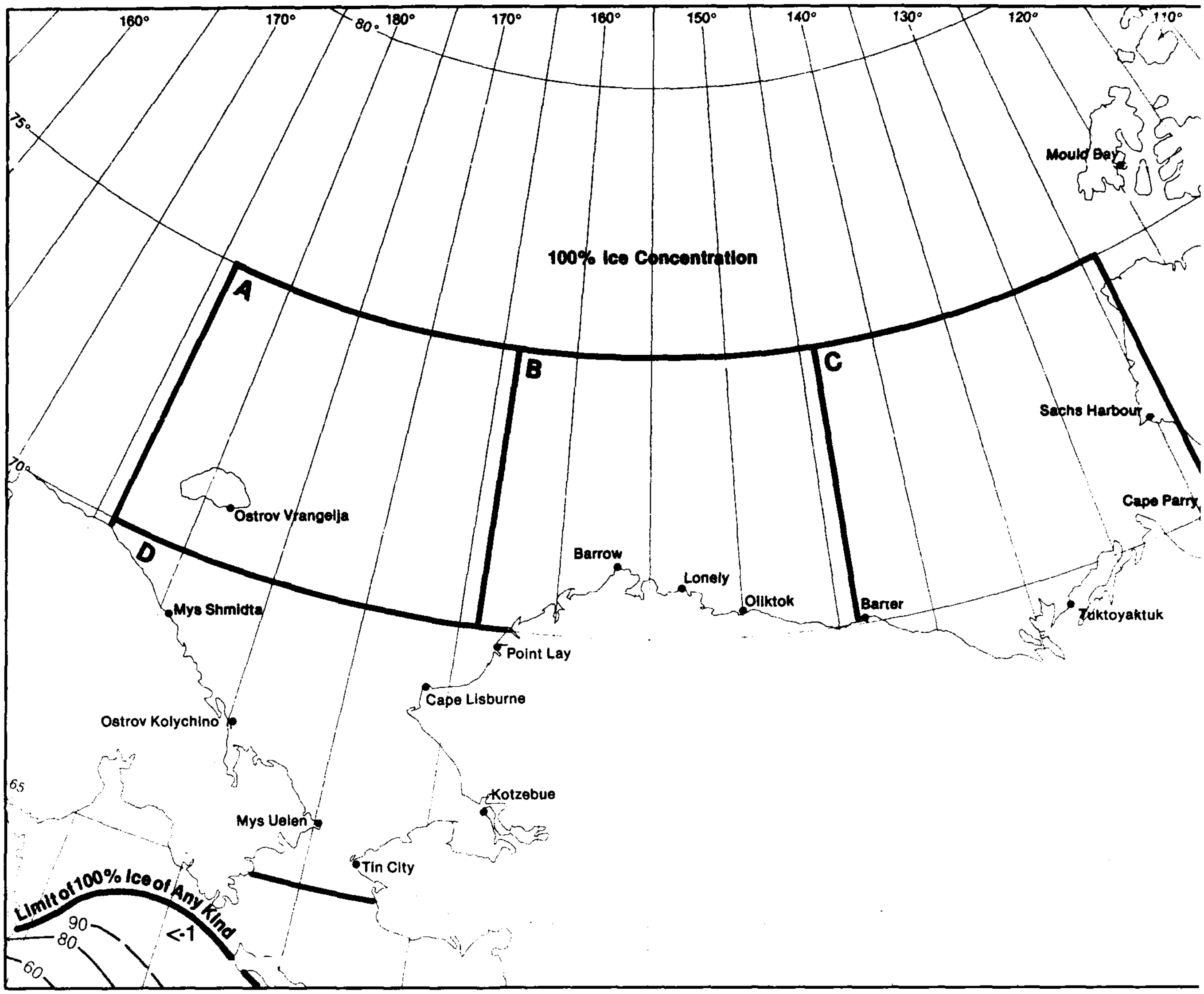
17 Legend

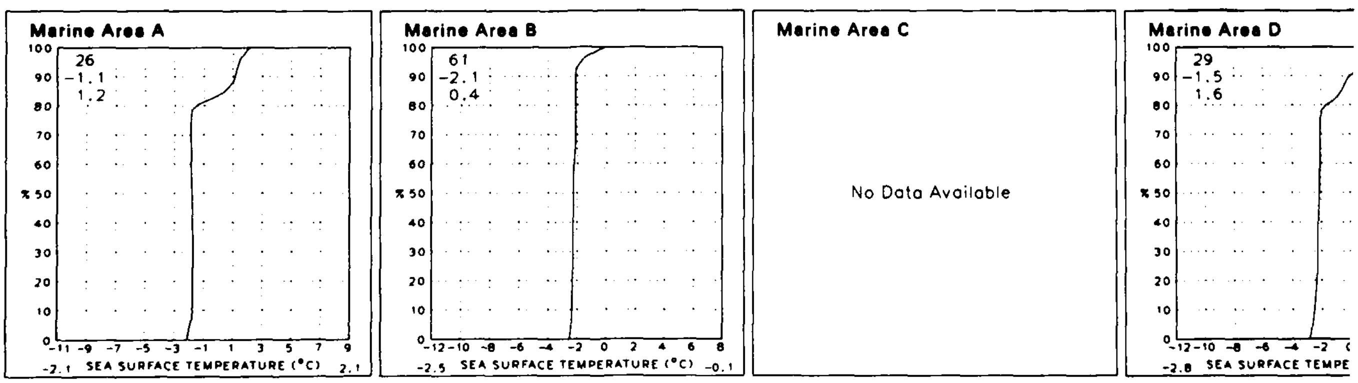




January

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice o





17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind

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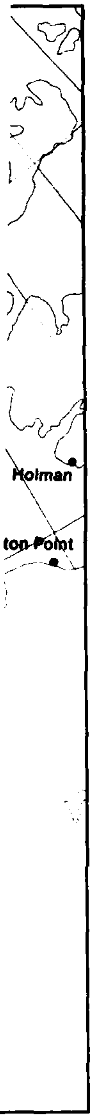

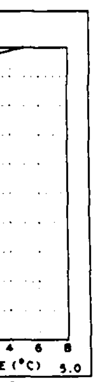

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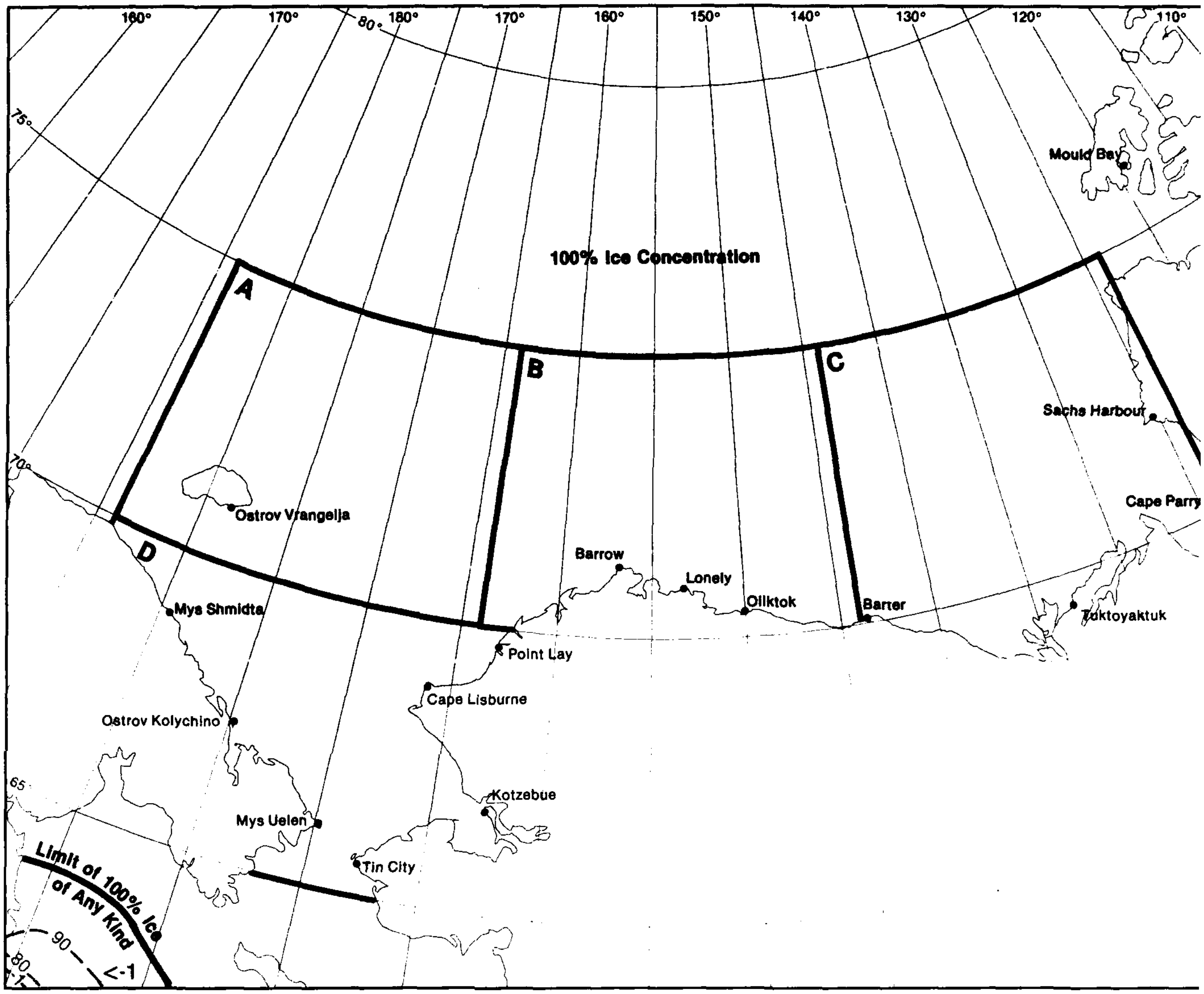
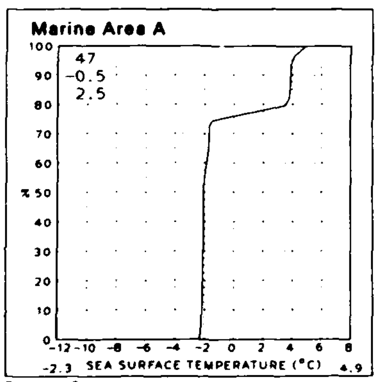
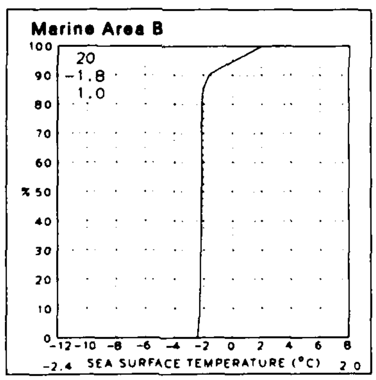
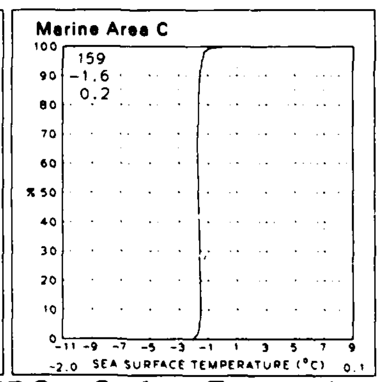
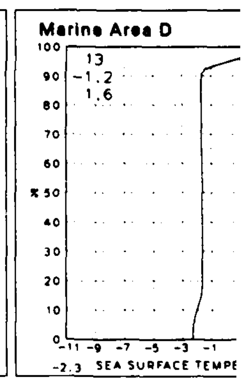
II-412











March

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice o

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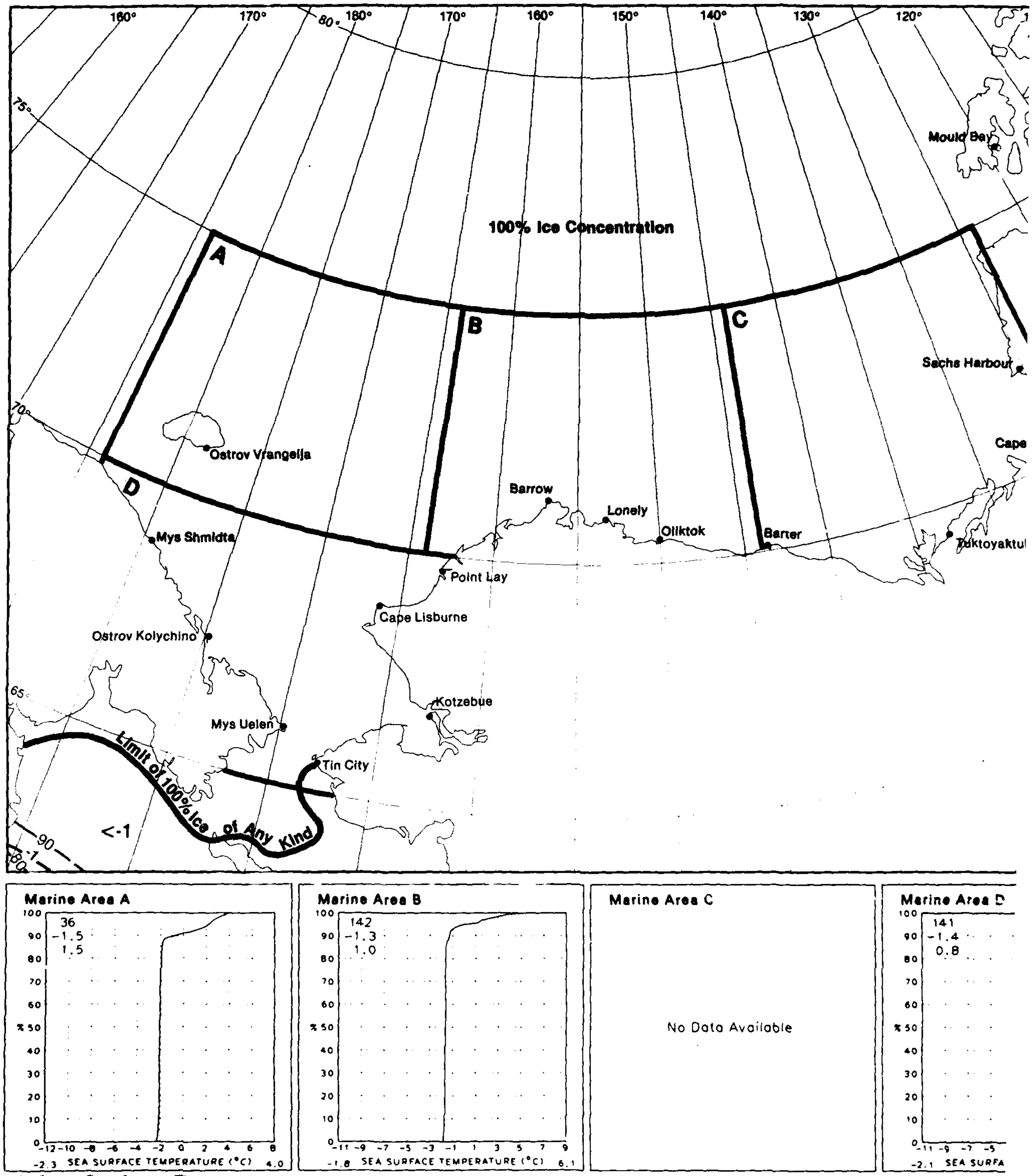
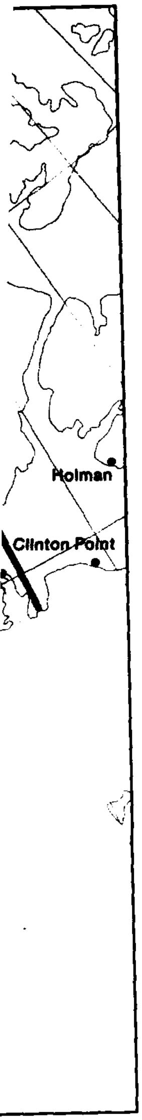
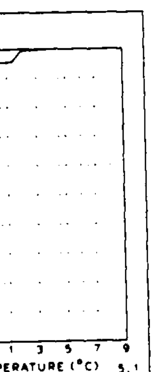


17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind





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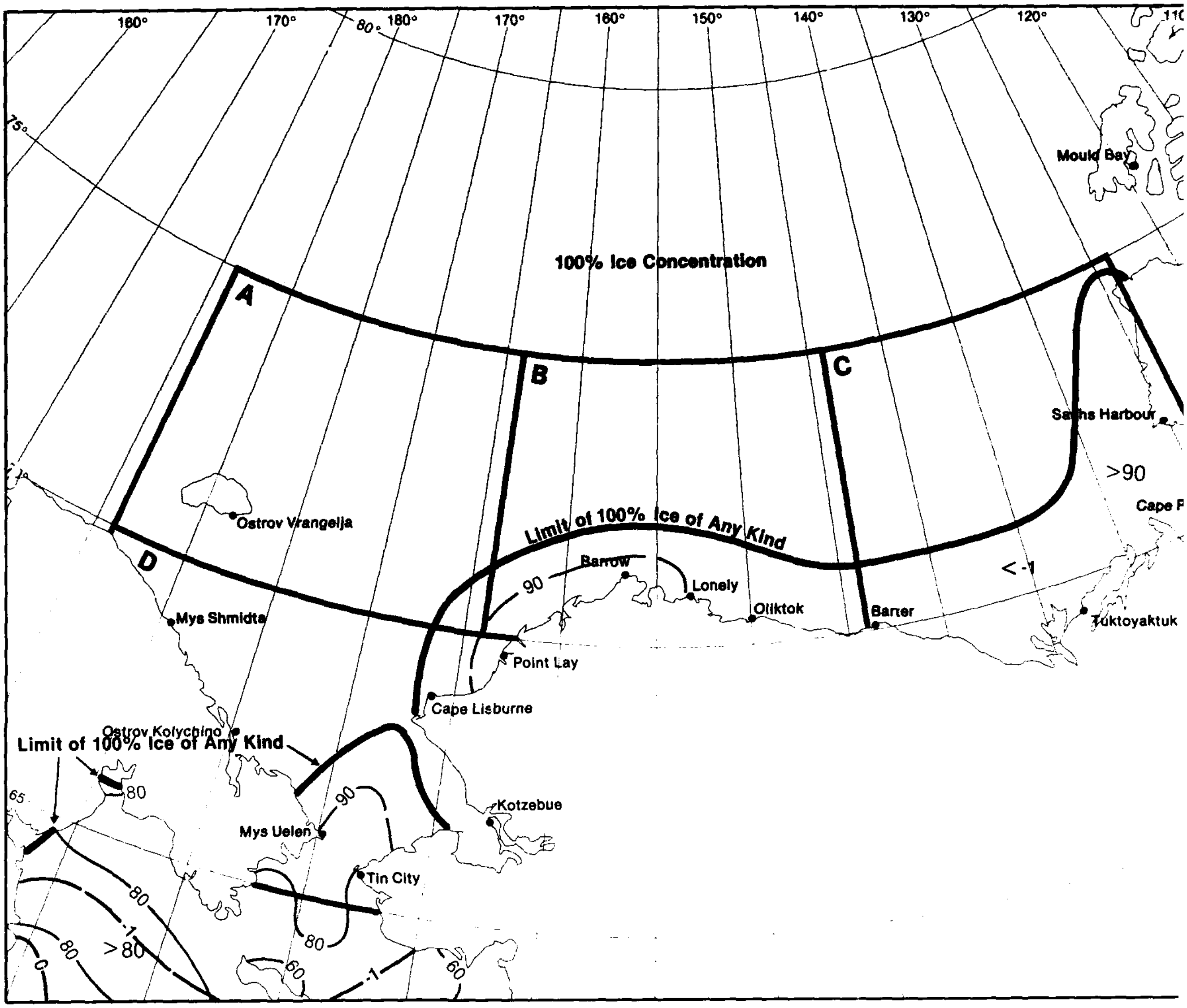
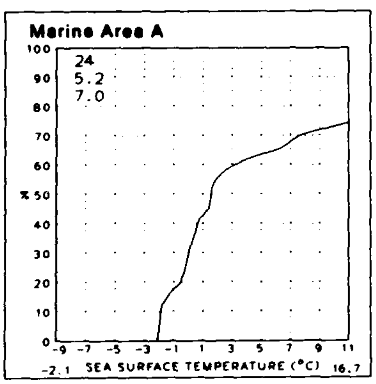
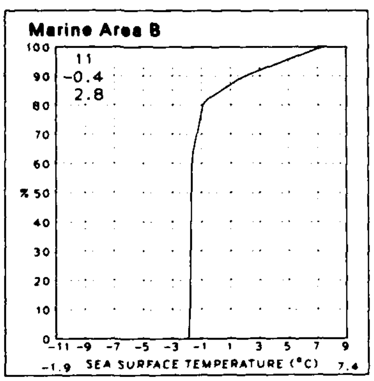
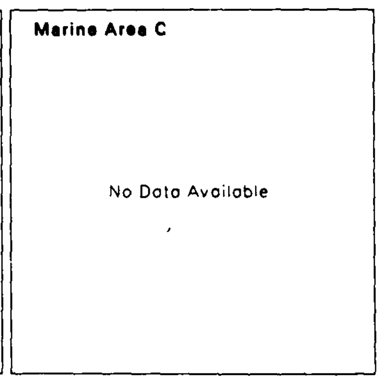
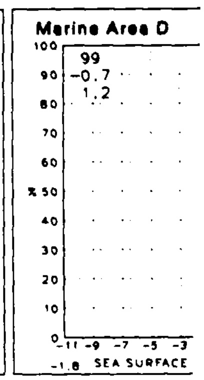




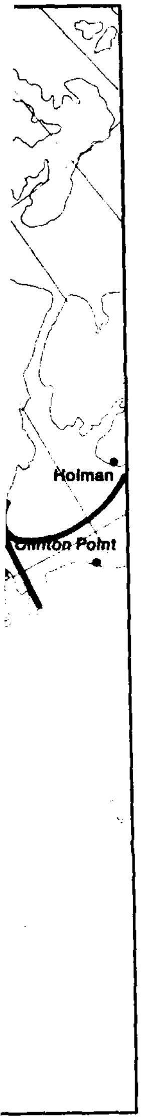


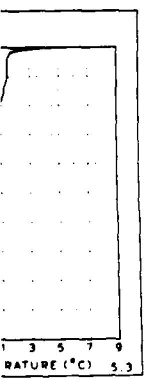




May

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ic





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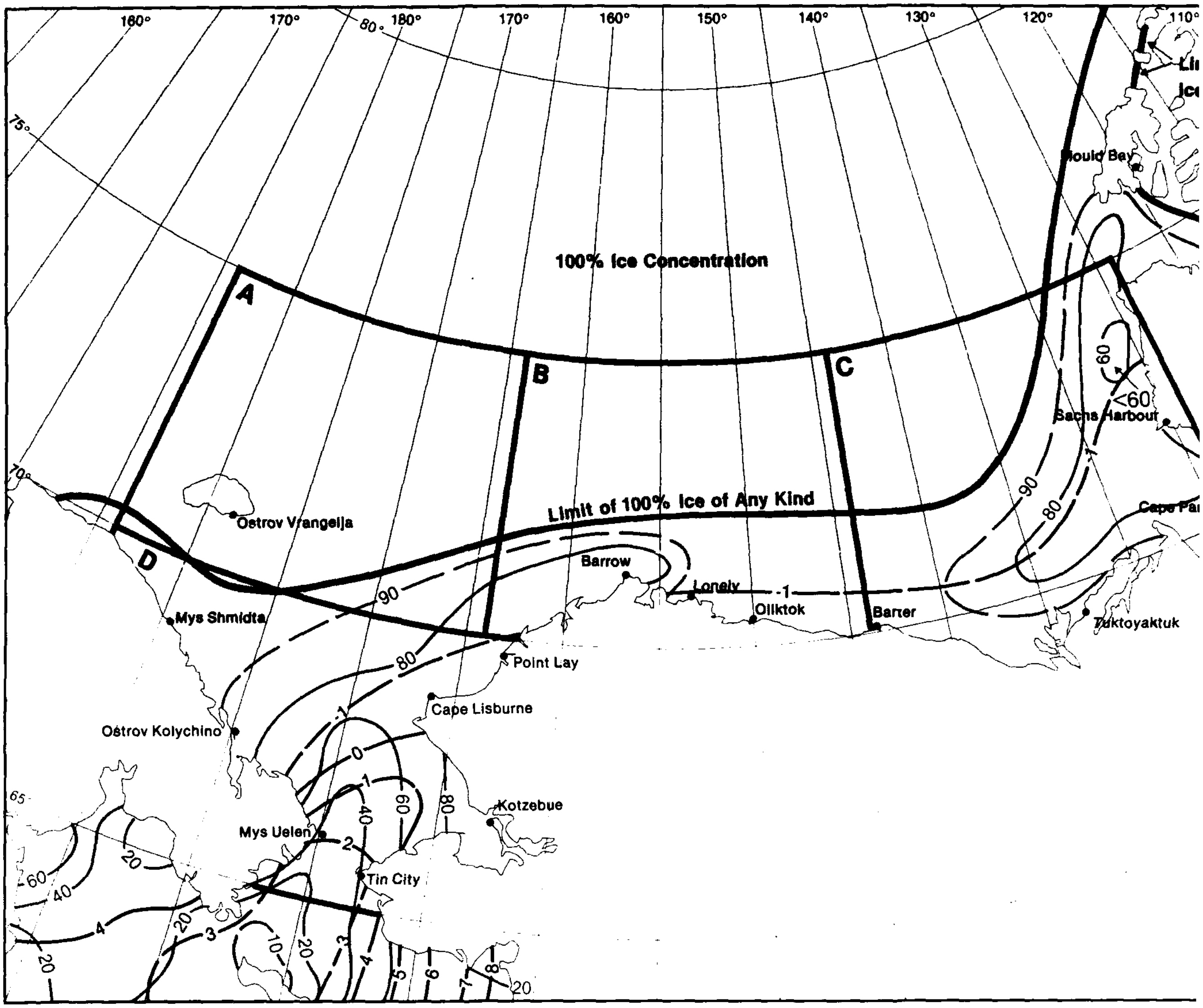
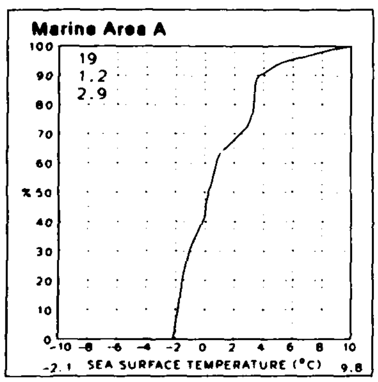
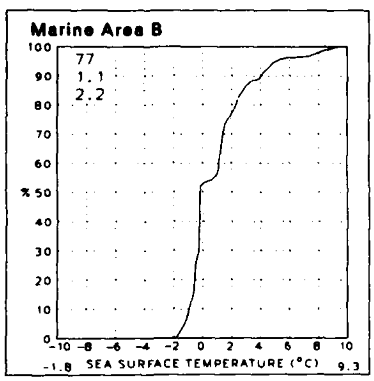
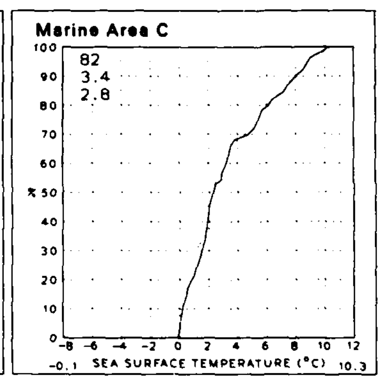
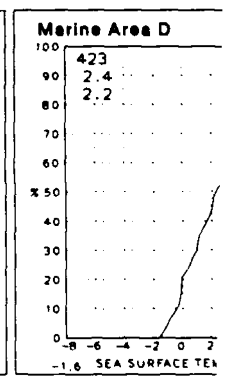


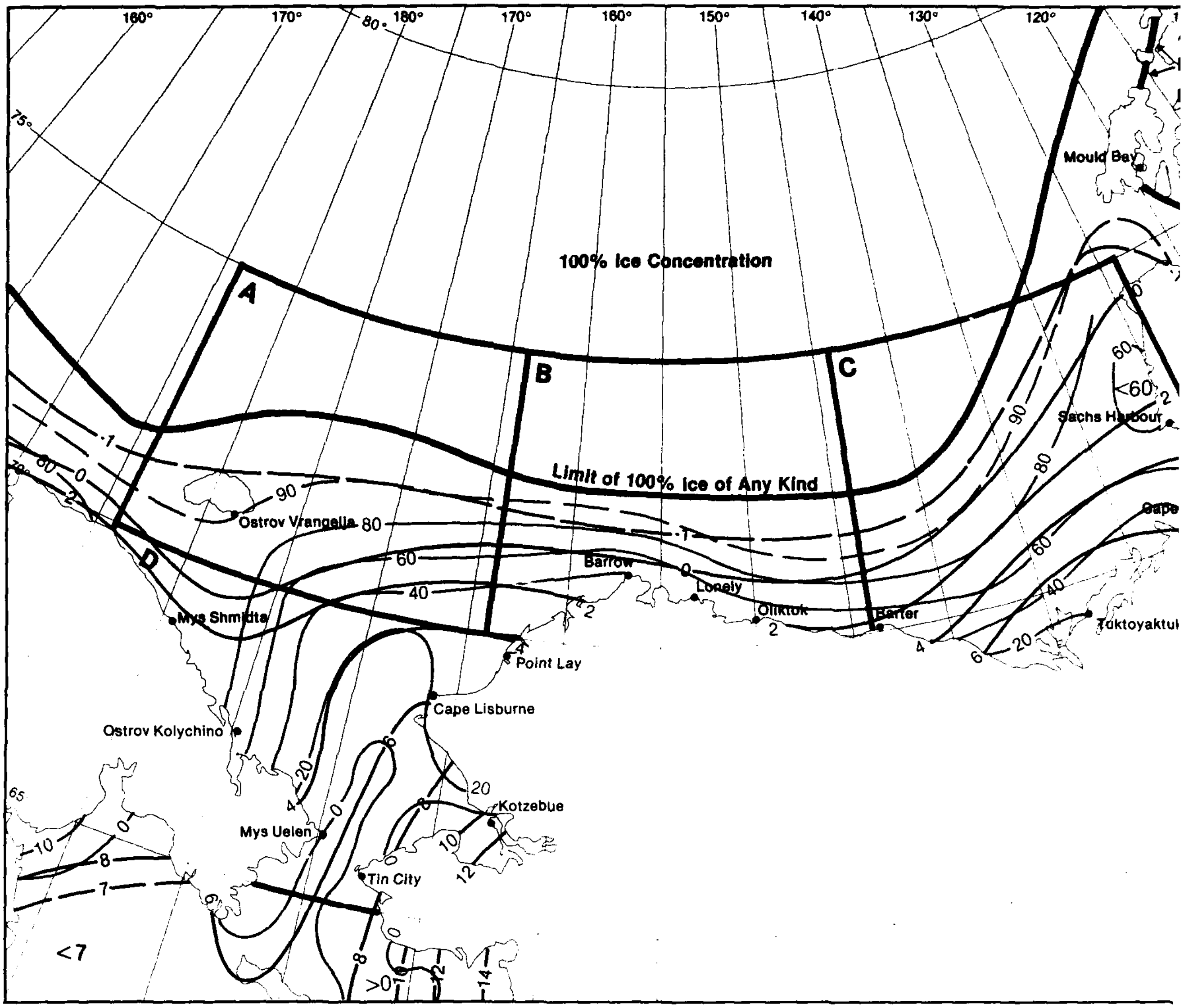


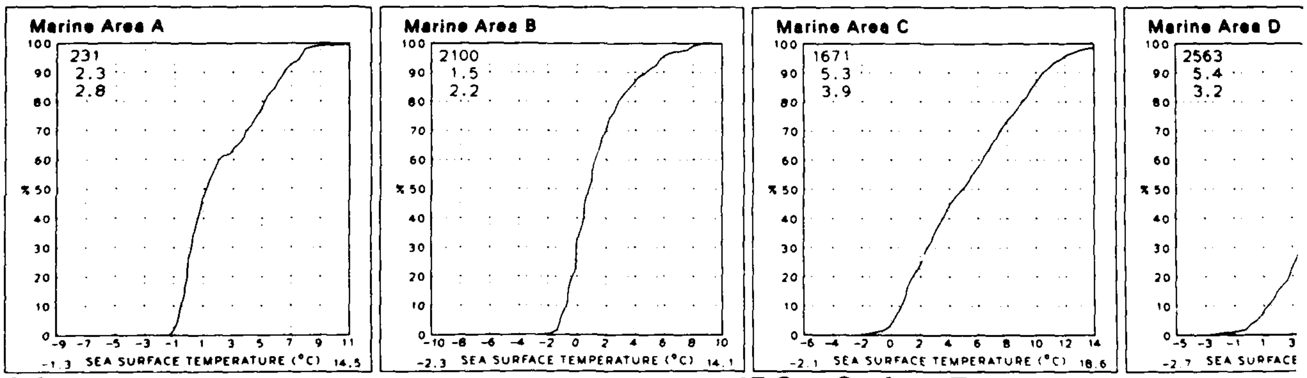






17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind

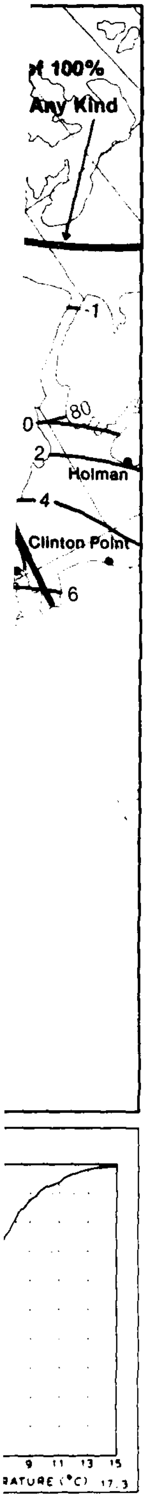




July

17 Sea Surface Temperature

Mean Sea Surface Temperature and I(



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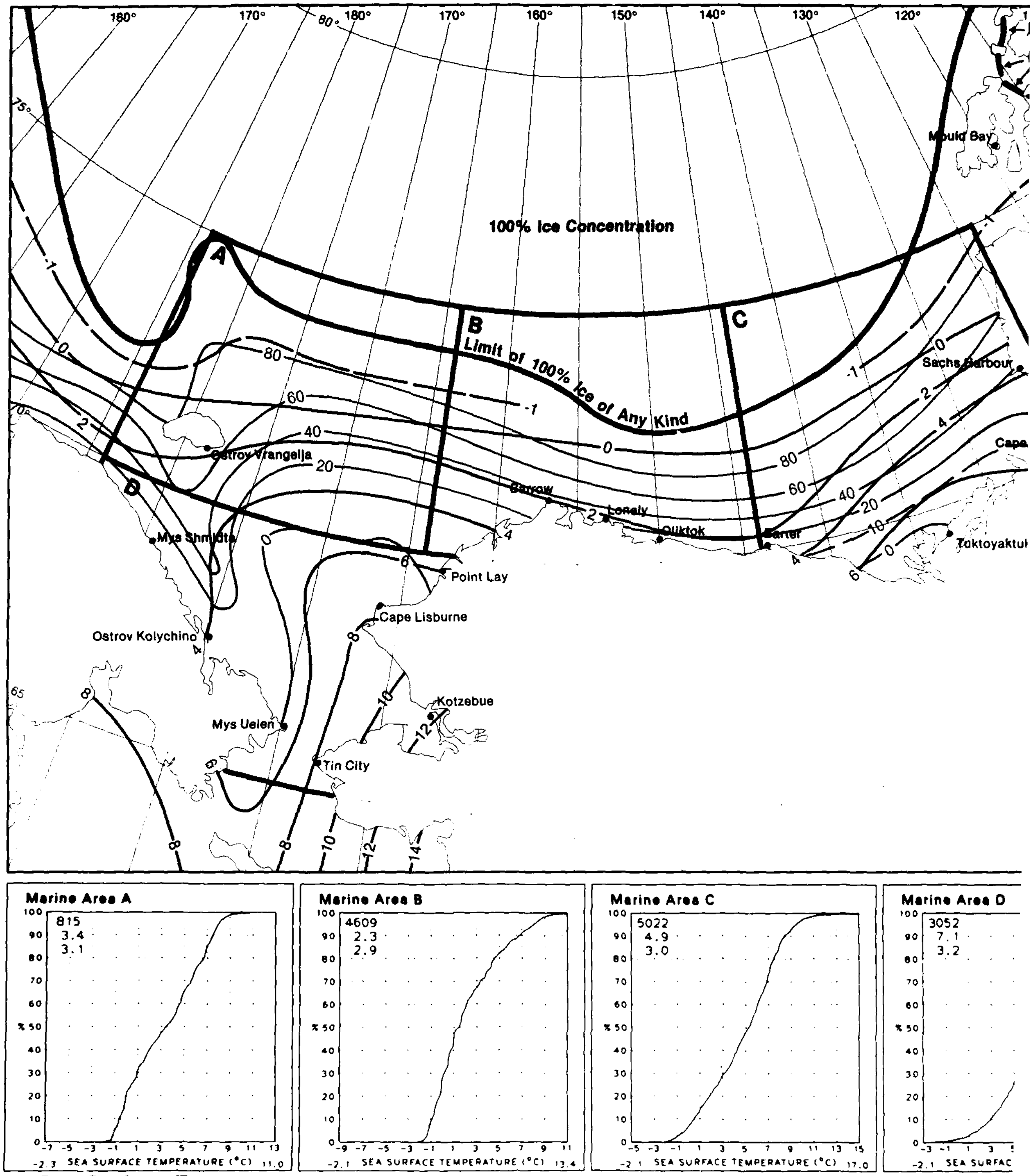
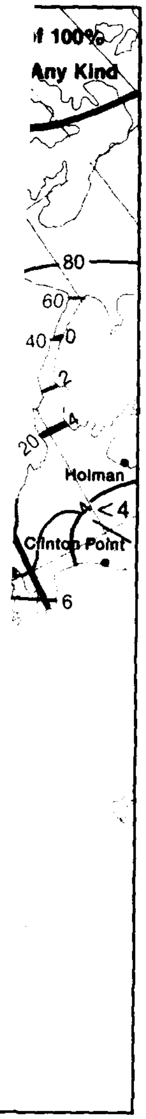
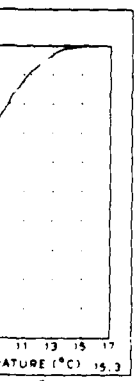


17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind





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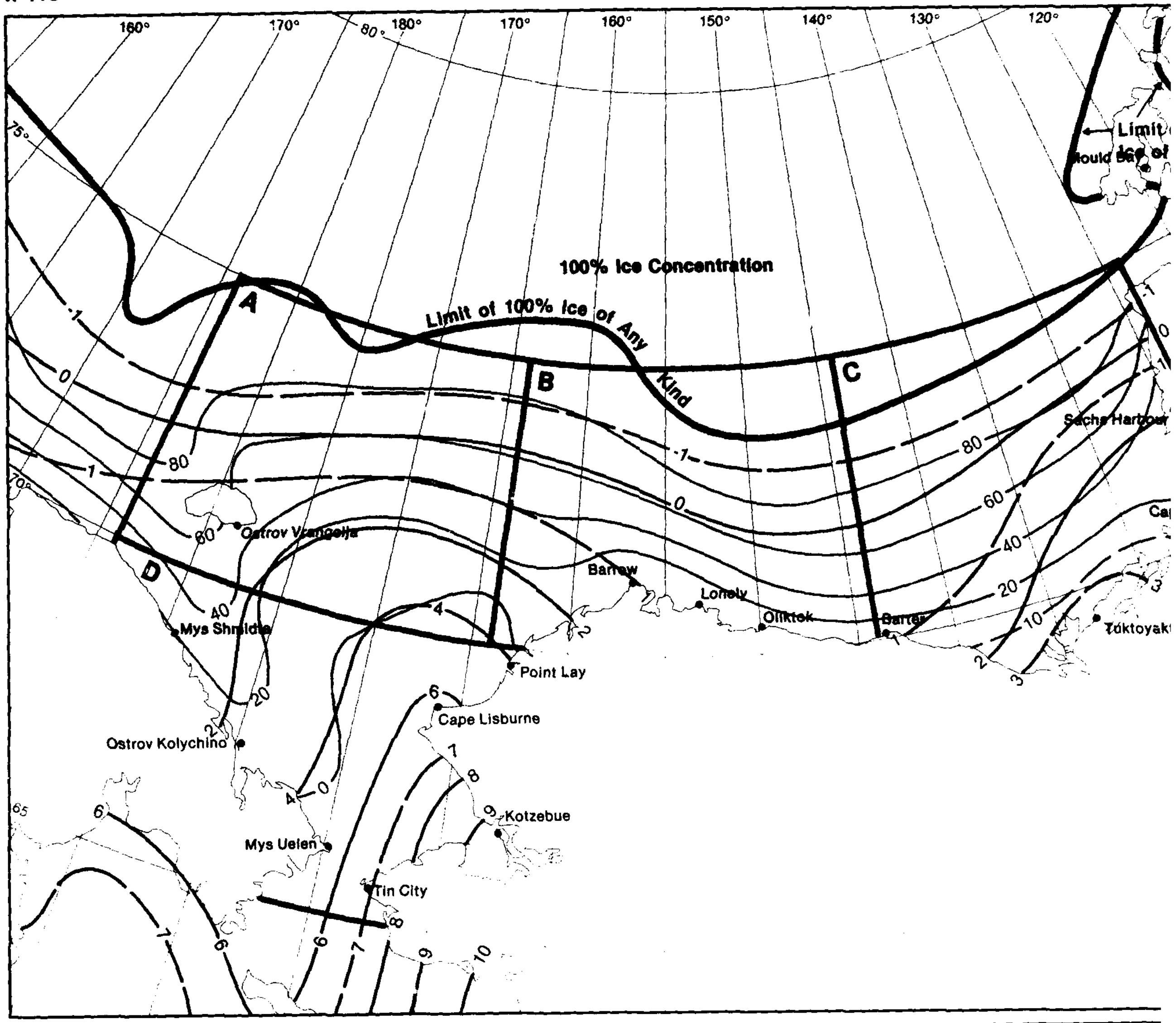

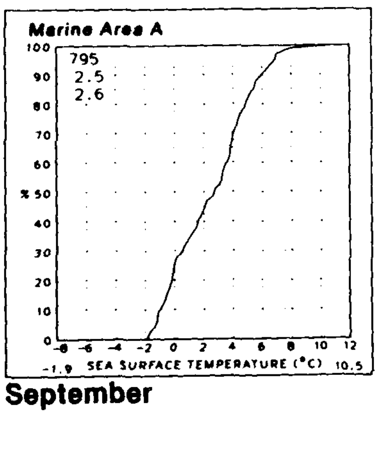

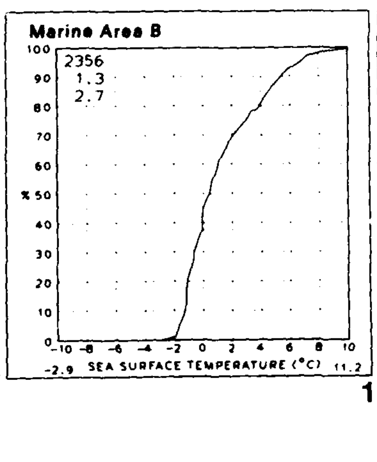

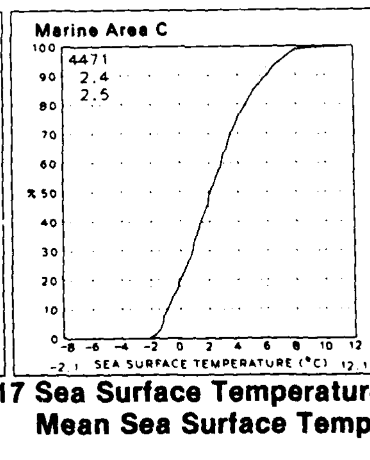

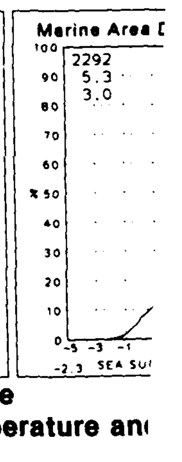

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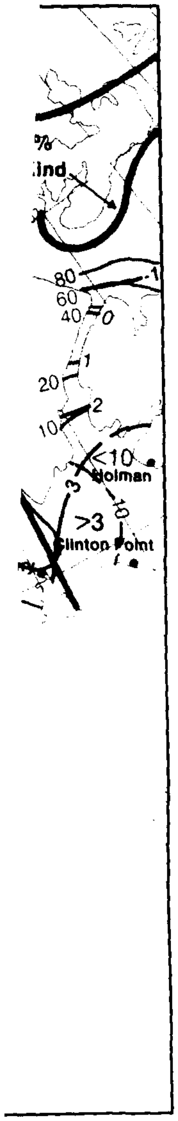
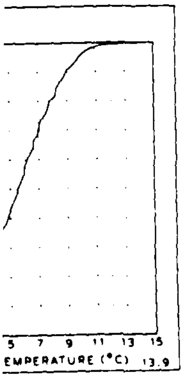
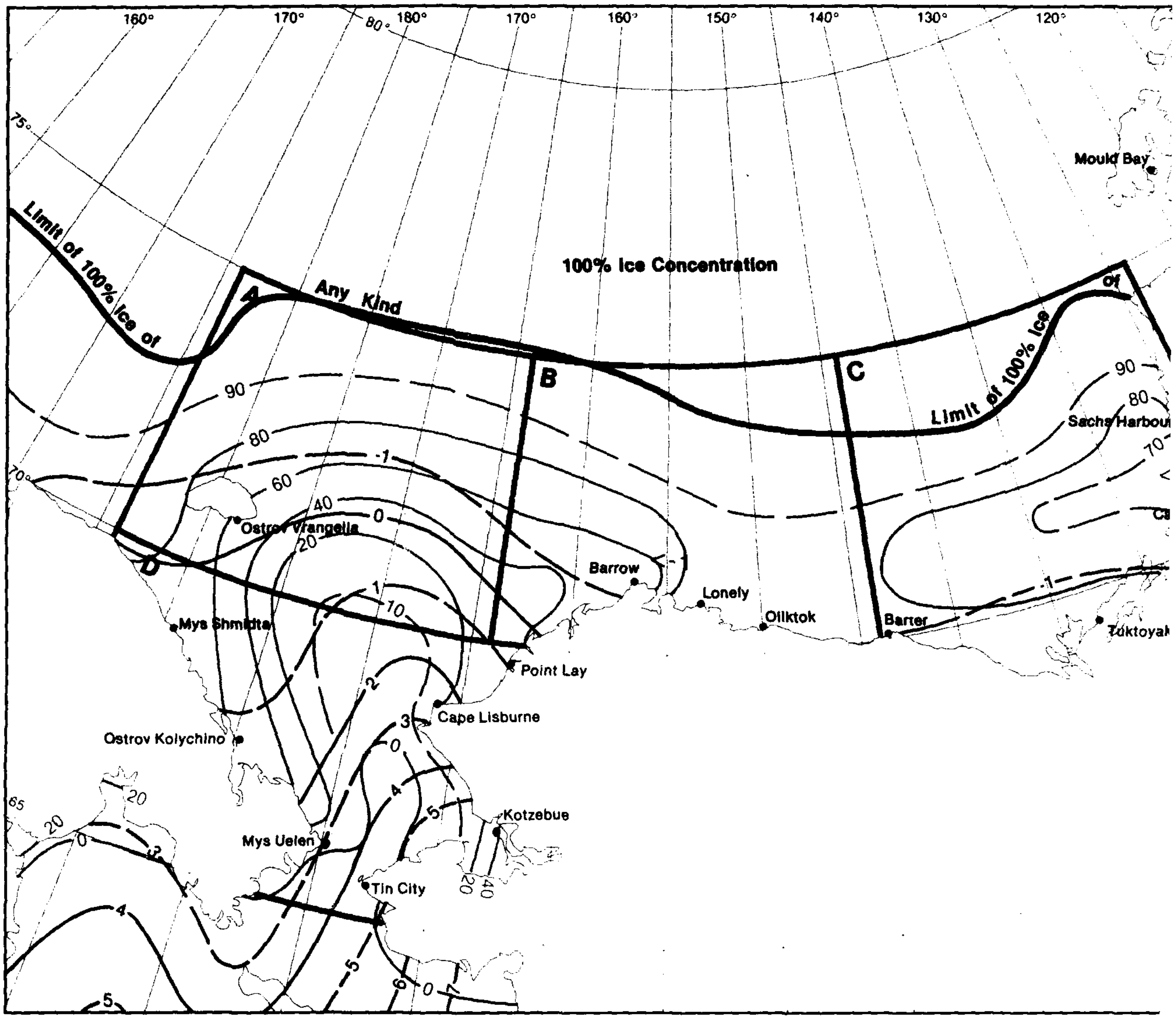
17 Sea Surface Temperature

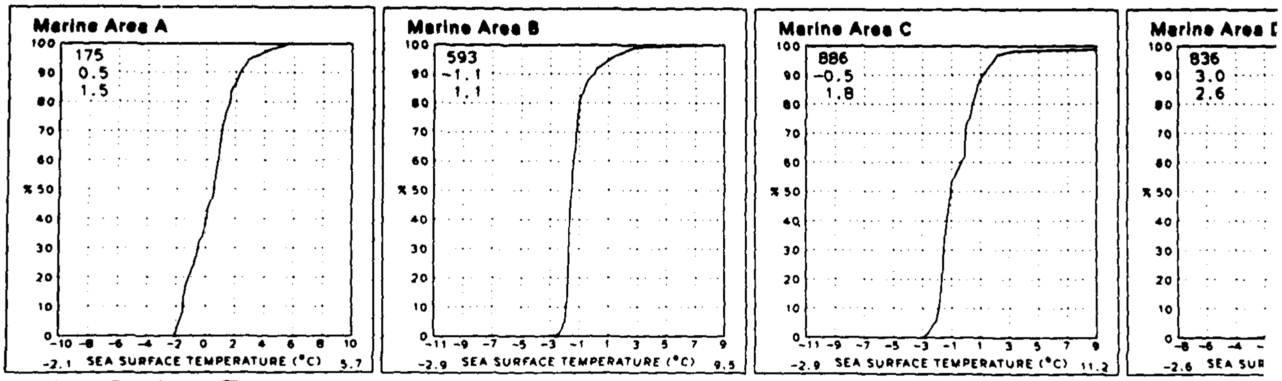
Mean Sea Surface Temperature an



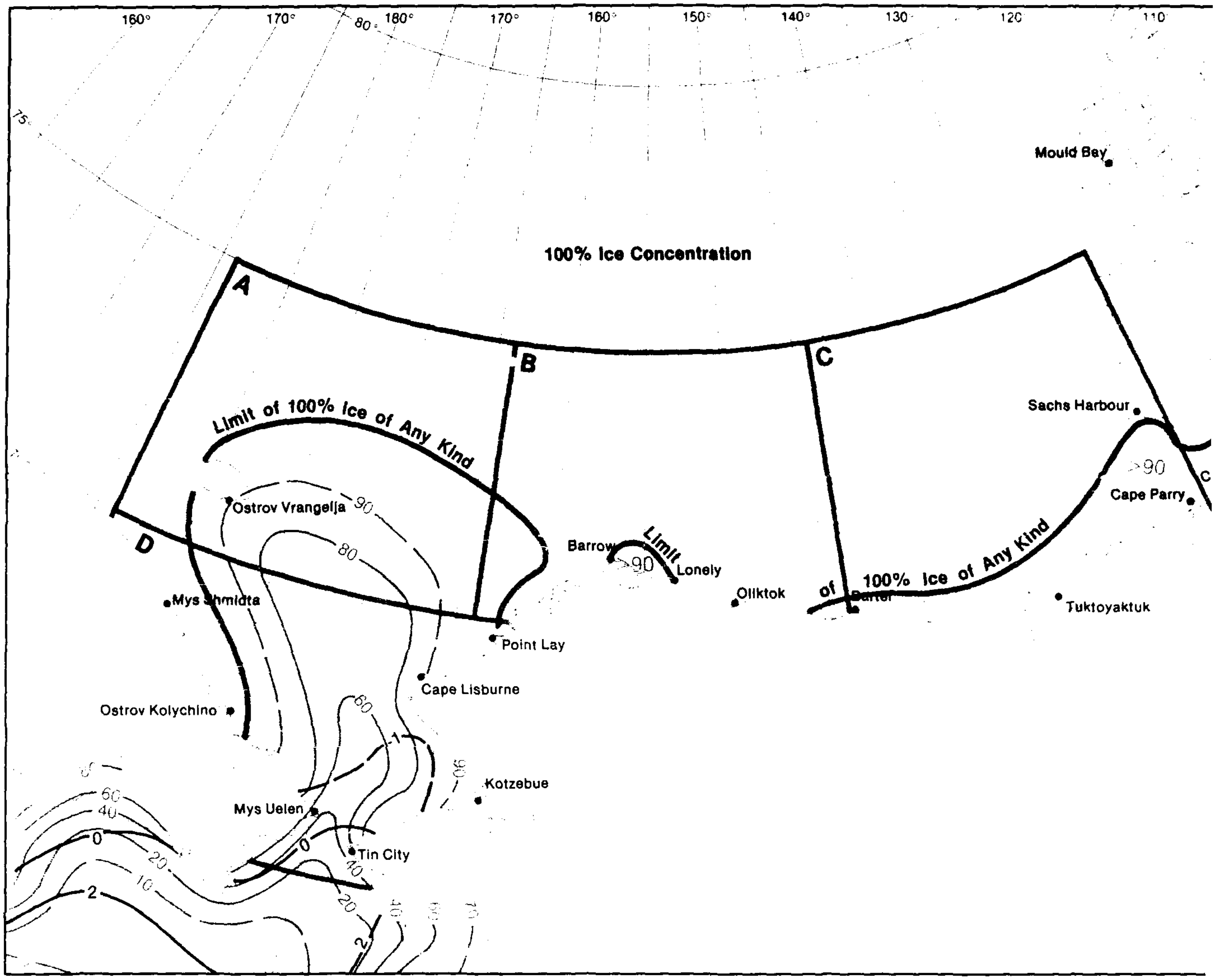


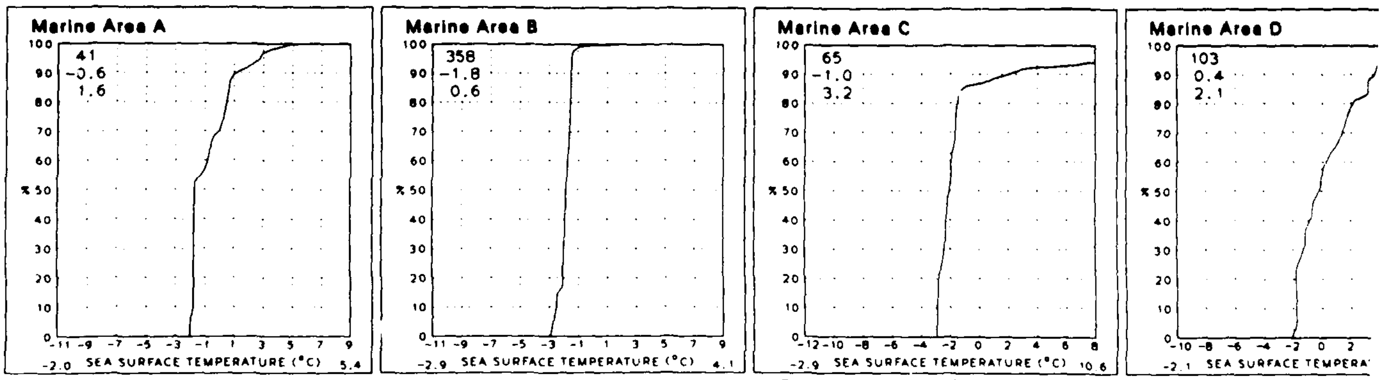
e of Any Kind





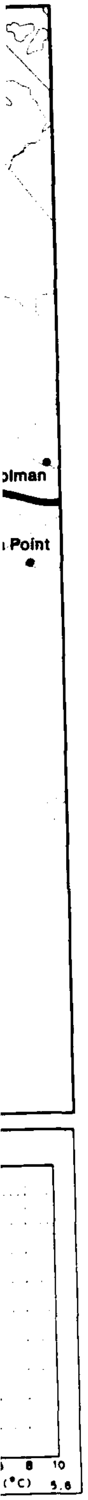
17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind





November

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of



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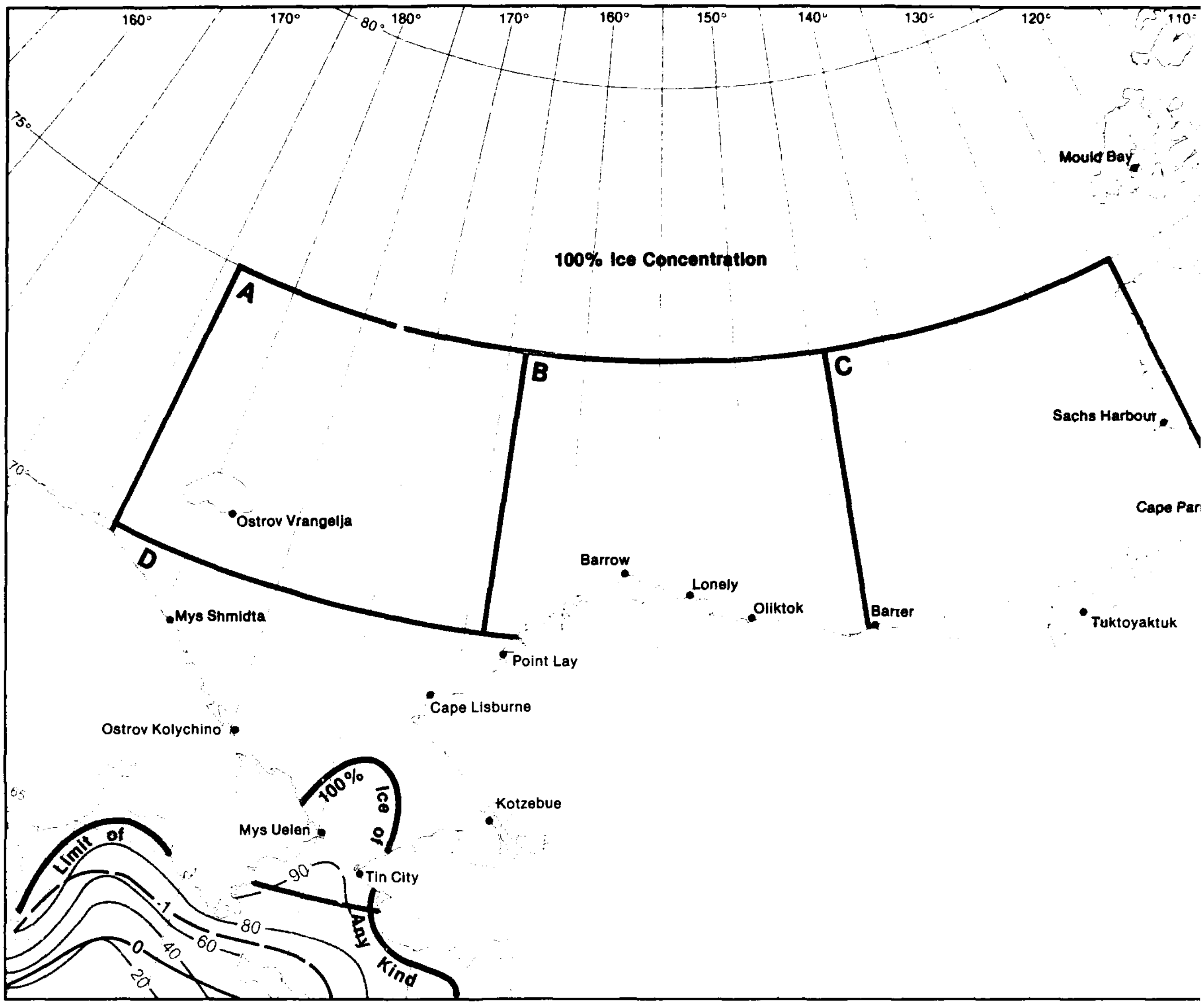
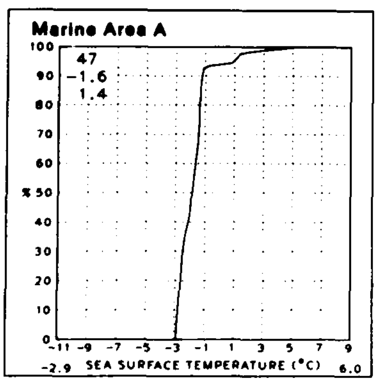
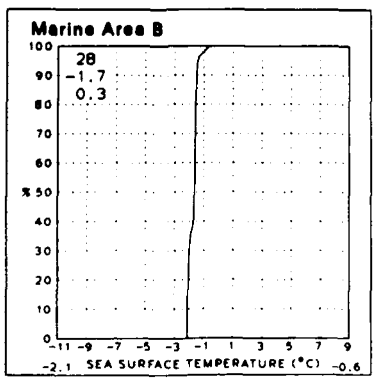
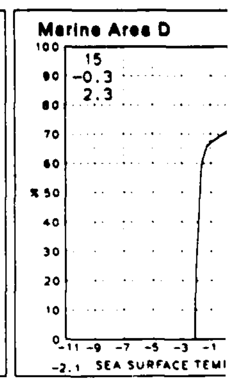






Marine Area C

No Data Available



17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind

Map 18. Wave height ≦3 feet and ice concentration ≧5/10ths

BLACK LINE – Percent frequency of wave height ≦3 **feet (1 meter).**

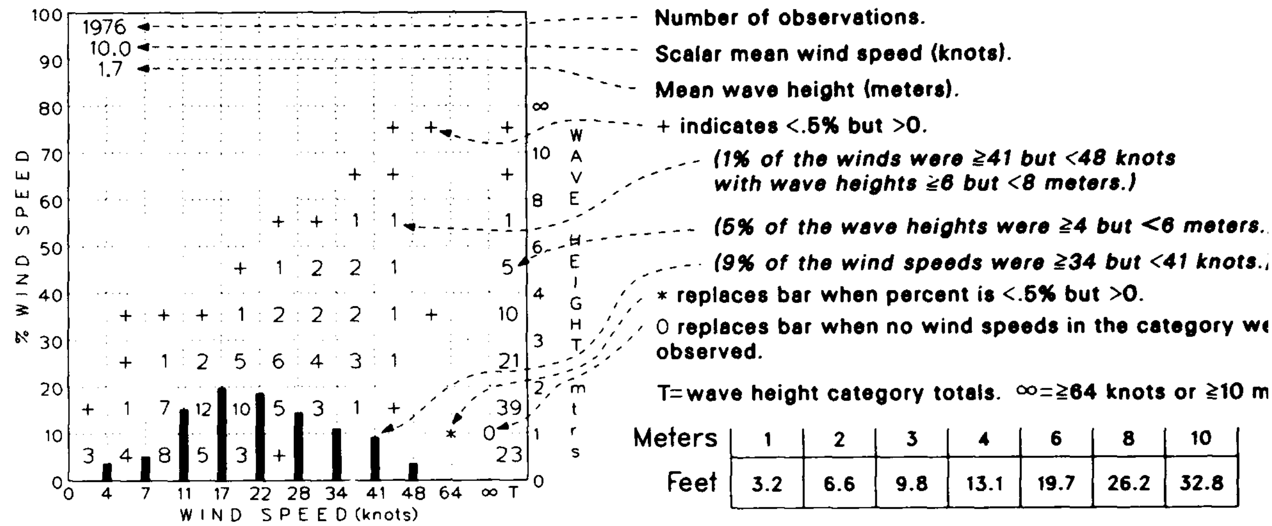
BLUE LINE – Percent frequency of ice concentration **≧5/10ths.**

Albers Equal–Area Conic Projection

Graphs: Wave height/wind speed

Wind speed frequency: Bars are percentages for each wind speed category.

Wave height frequency: Numbers are percentages of wave height for various wind speeds.



Meters	1	2	3	4	6	8	10
Feet	3.2	6.6	9.8	13.1	19.7	26.2	32.8

Wave heights have been recorded in a consistent quantitative code only since the late 1940's. The reluctan observers to take wave observations in the earlier years and the difficulty in estimating waves, especially in con make wave observations one of the least commonly observed elements. The observations are also subject to bia characteristics. A correction factor of approximately 10% was suggested by Hogben and Lumb (1967) and has bee preliminary work at NCDC where Quayle (1980) found that generally the heights are too low, the periods too short, ar discrimination poor. The data in this study have not been adjusted for the suspected biases. The marine observatio cessed through quality control procedure where an internal check was made between wind speed and sea height. swell data were then arrayed and suspicious outliers deleted. The higher of the sea wave or swell was selected for tion. If the heights were equal, the wave with the longer period was selected.

Wave height isopleth presentations in Sets 18 and 19 are for a generally nonhazardous sea condition; i.e., wave than 3 feet and 8 feet, respectively. Isopleth presentations in Set 20 define much more hazardous sea condition heights equal to or greater than 12 and 20 feet. Refer to the texts of Sets 14 and 18-21 for complete information on w the introductory text of Section II for sea ice information.

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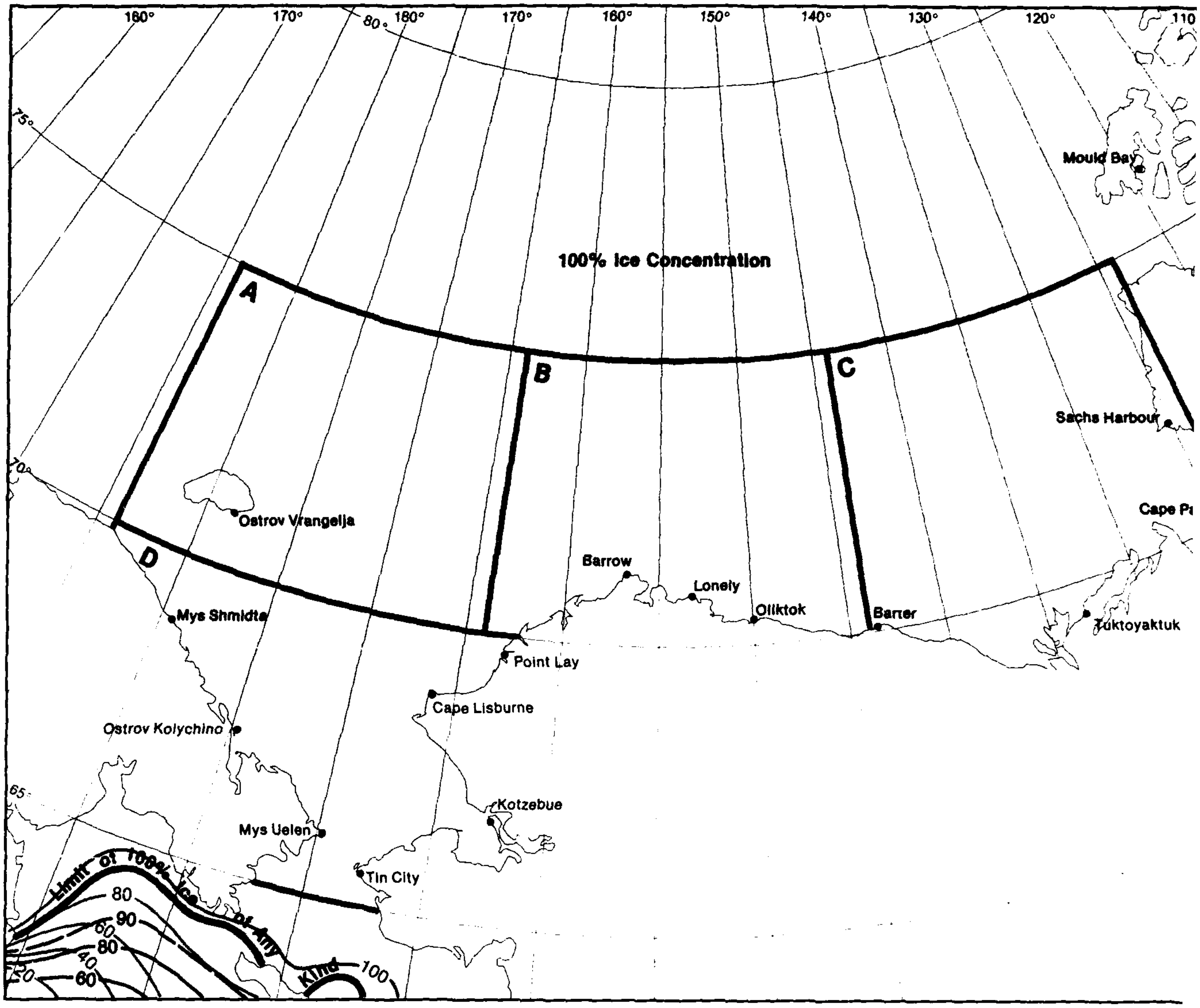


Marine Area A

No Data Available

Marine Area B

No Data Available

Marine Area C

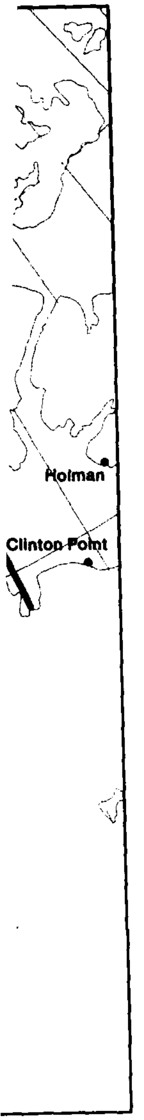
No Data Available

Marine Area D

No Data A

January

18 Wave Height and Wind S
Wave Height ≦3 Feet an



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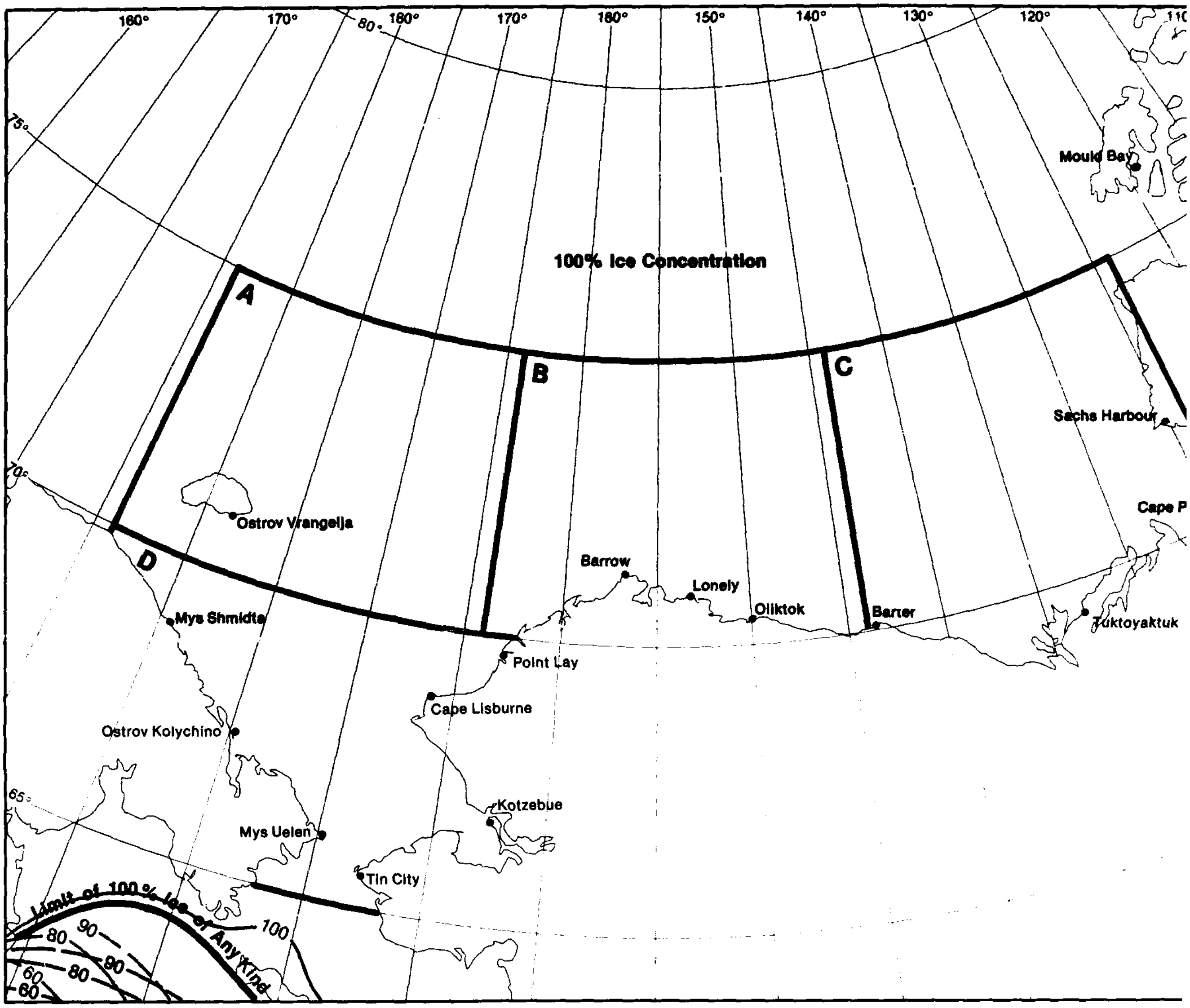
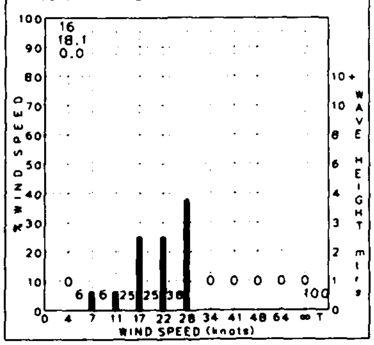


Marine Are..

No Data Available

Marine Area B



Marine Area C

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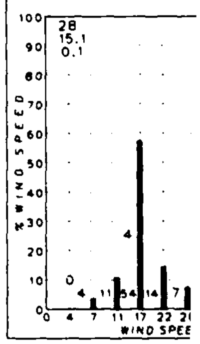
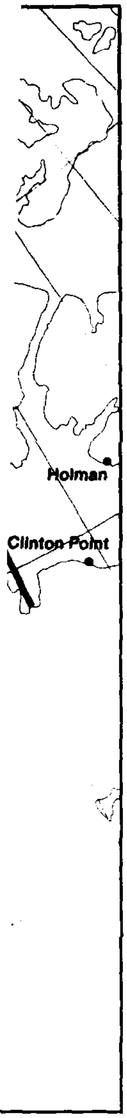
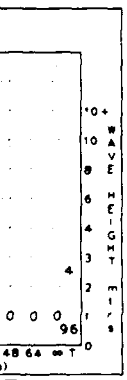
Marine Area D

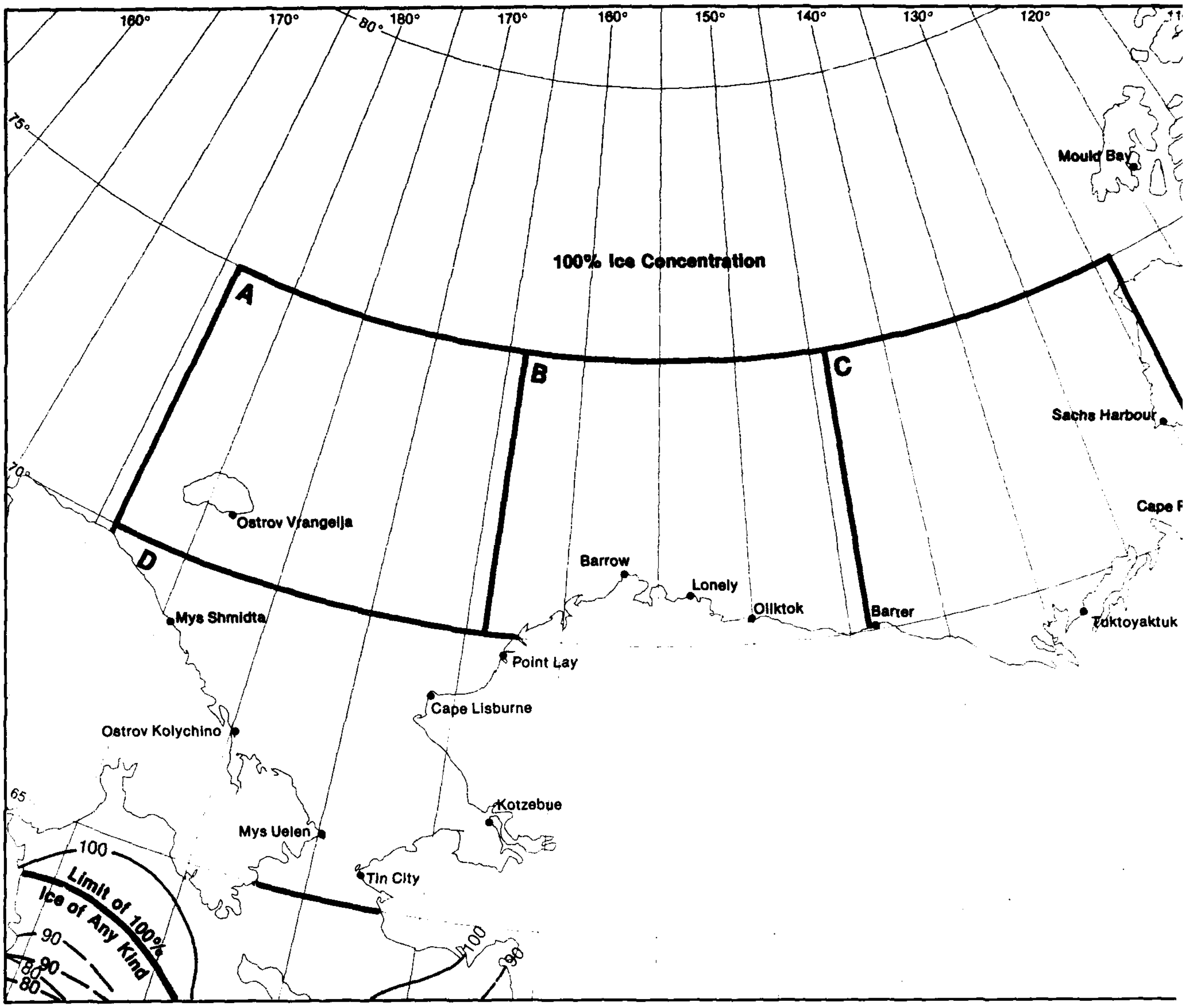


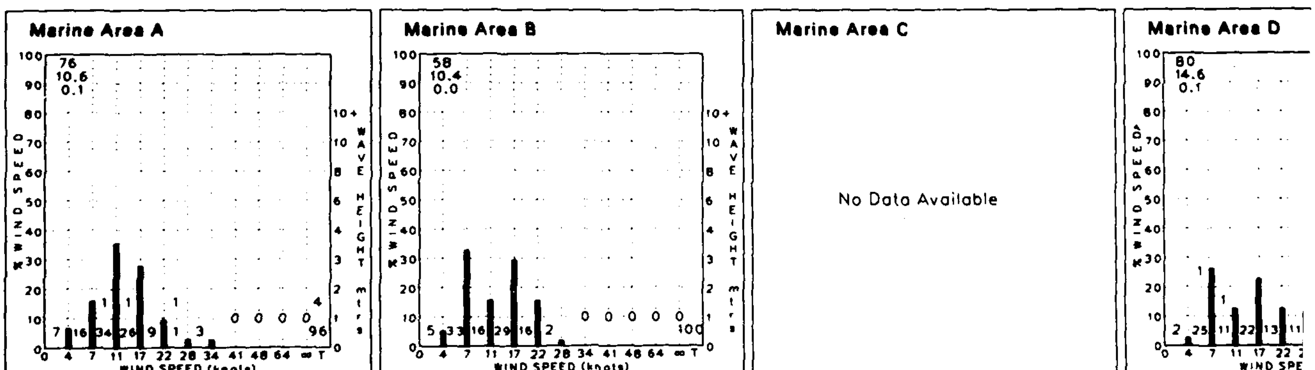
18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths





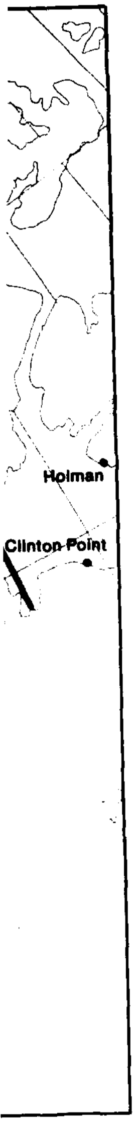
February

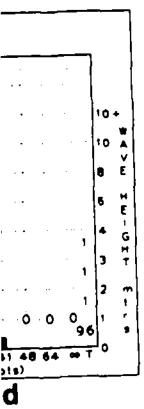




March

18 Wave Height and Wind S
Wave Height ≦3 Feet an





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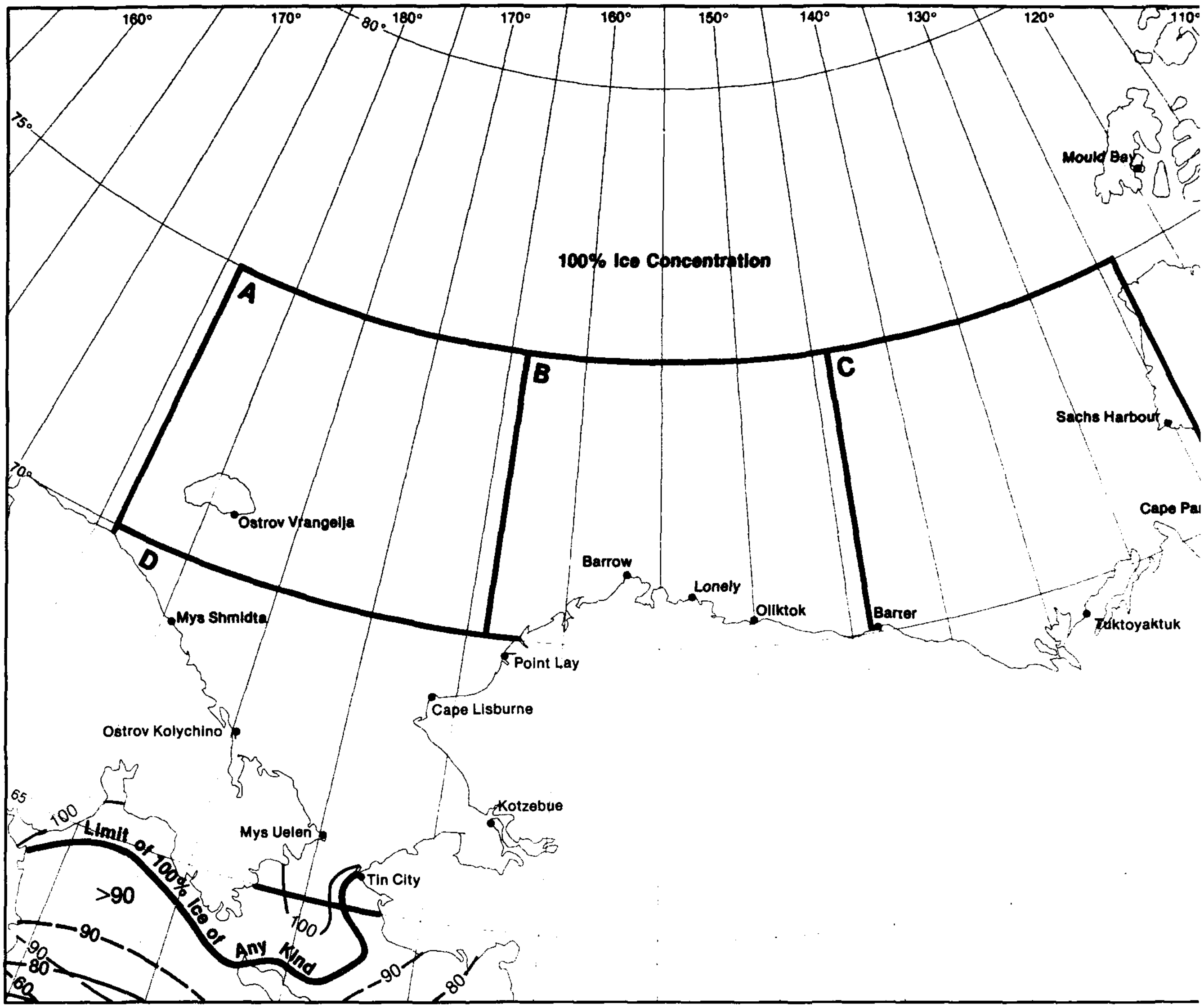
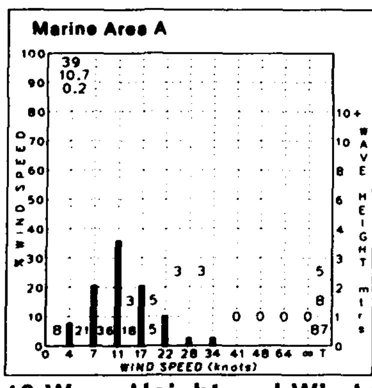
e ≧5/10ths



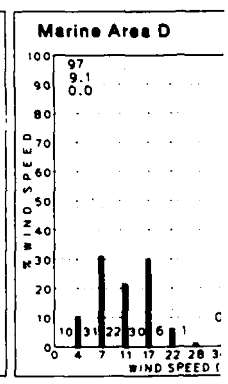


Marine Area B

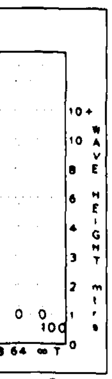
No Data Available

Marine Area C

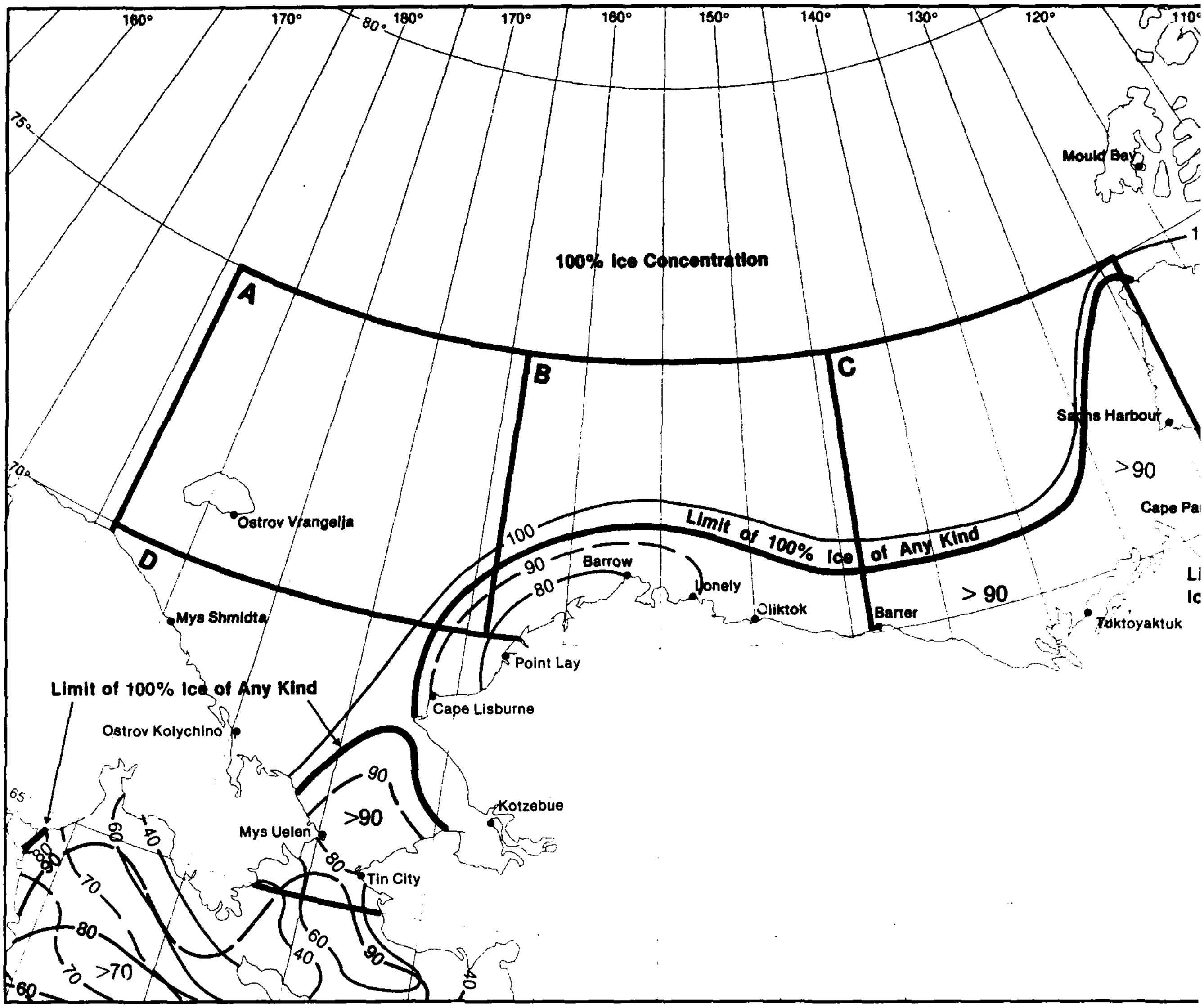
No Data Available



18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths



April



Marine Area A

No Data Available

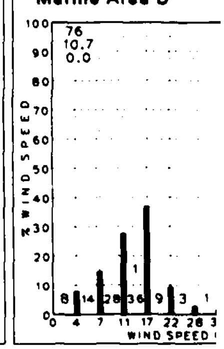
Marine Area B

No Data Available

Marine Area C

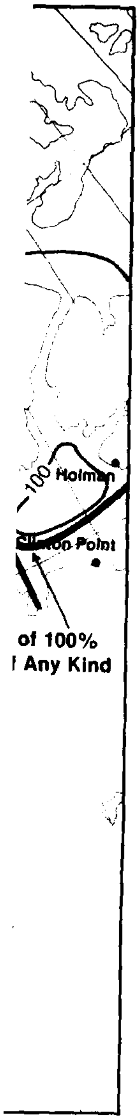
No Data Available

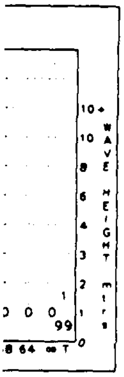
Marine Area D



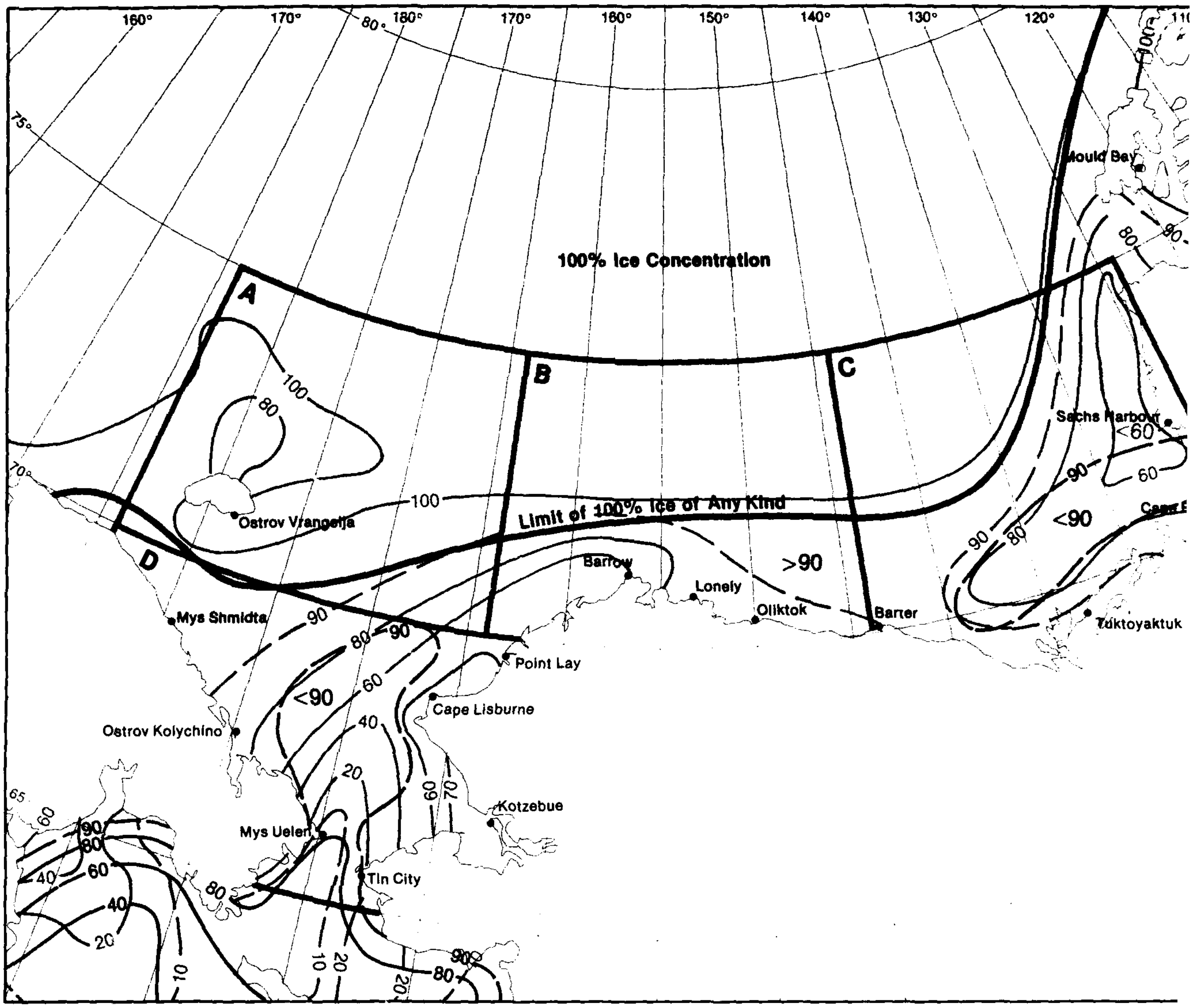
May

18 Wave Height and Wind Spe
Wave Height ≤3 Feet and I





≧5/10ths



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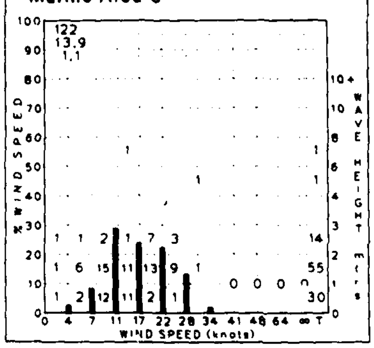
No Data Available

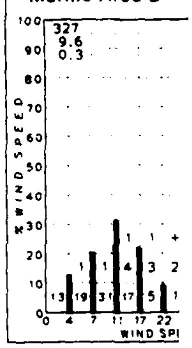
Marine Area B

No Data Available

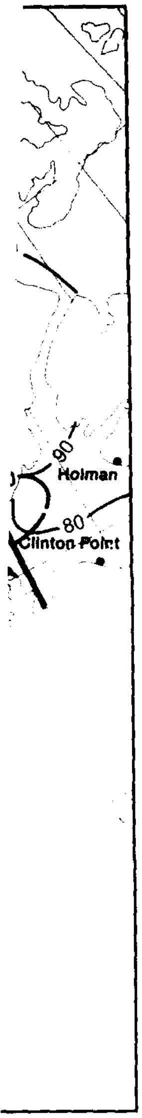
Marine Area C

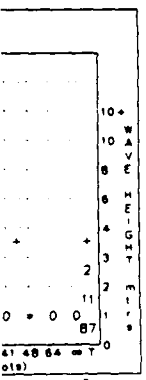


Marine Area D

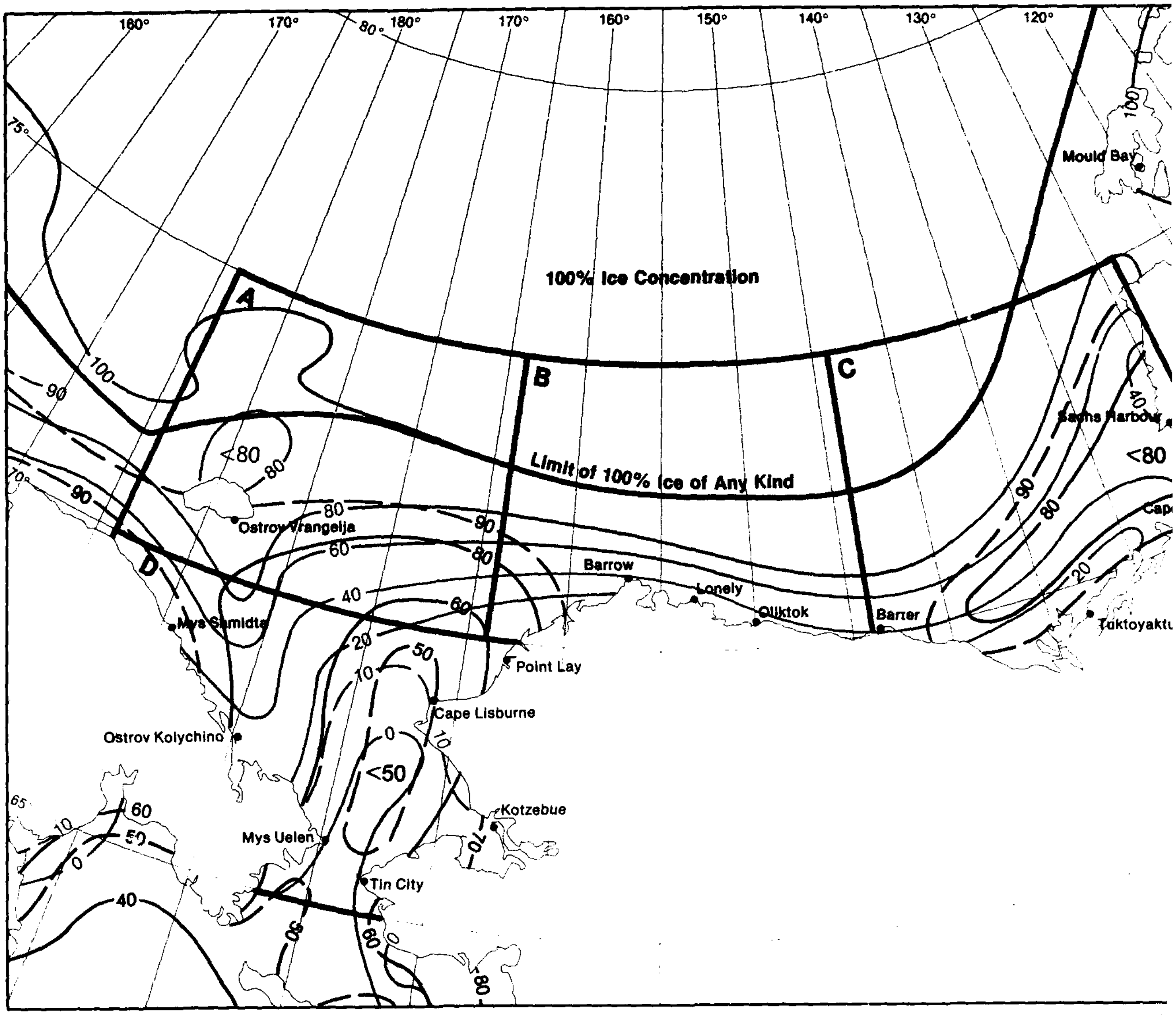


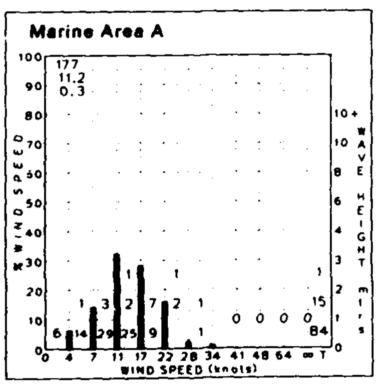
18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths

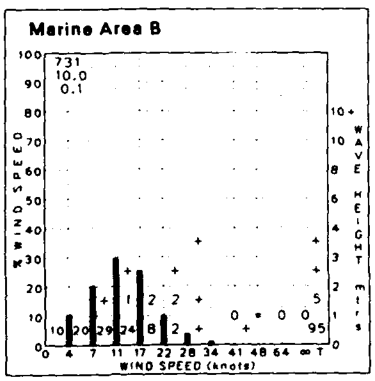


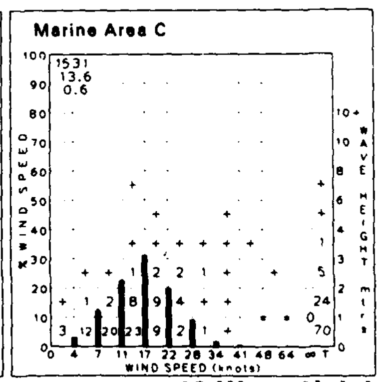


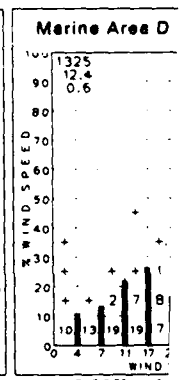
June





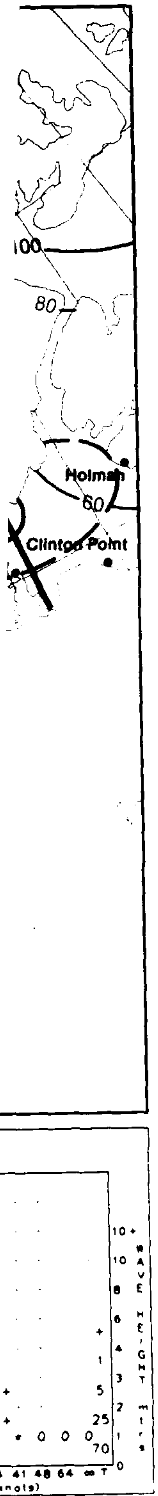




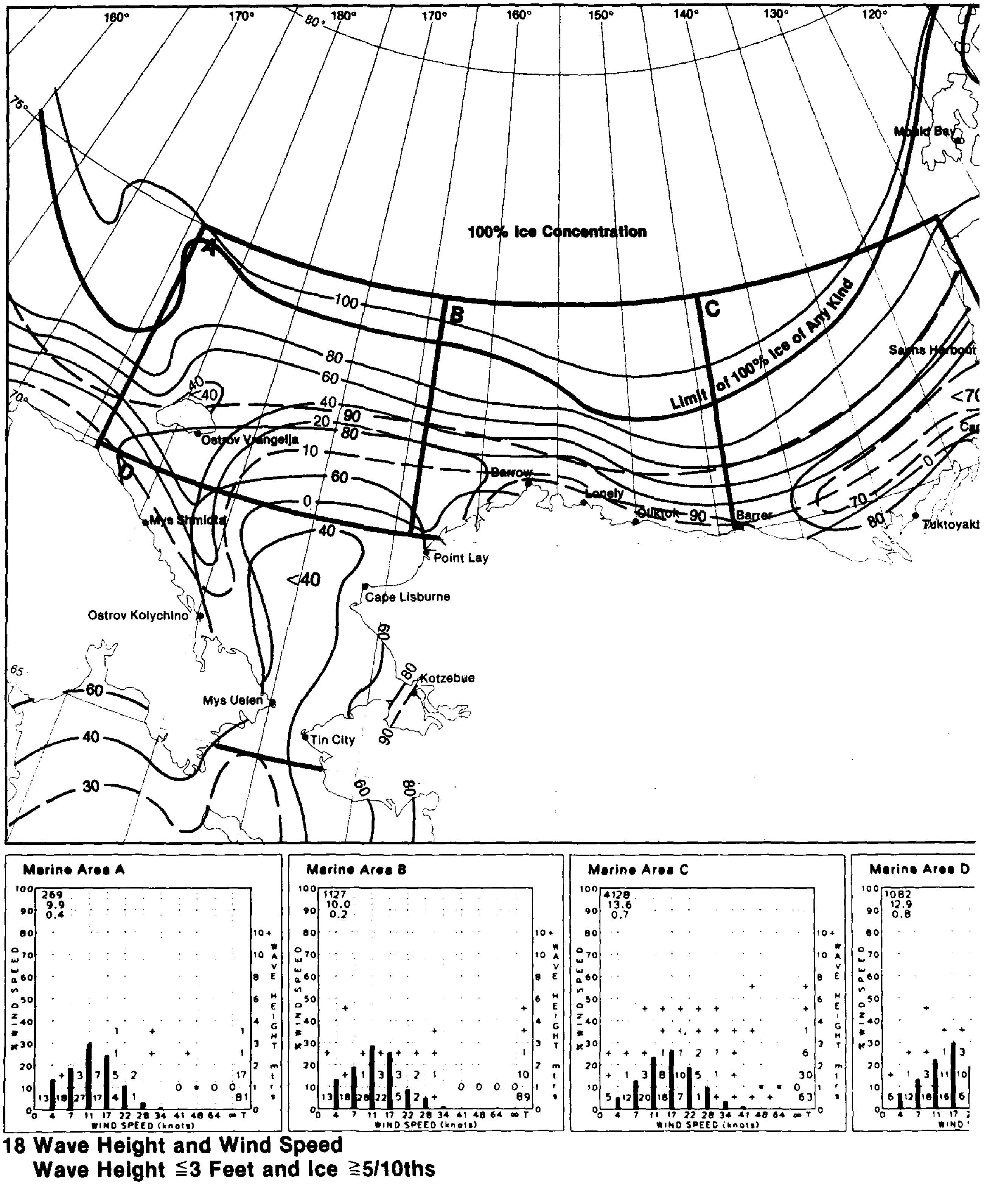


July

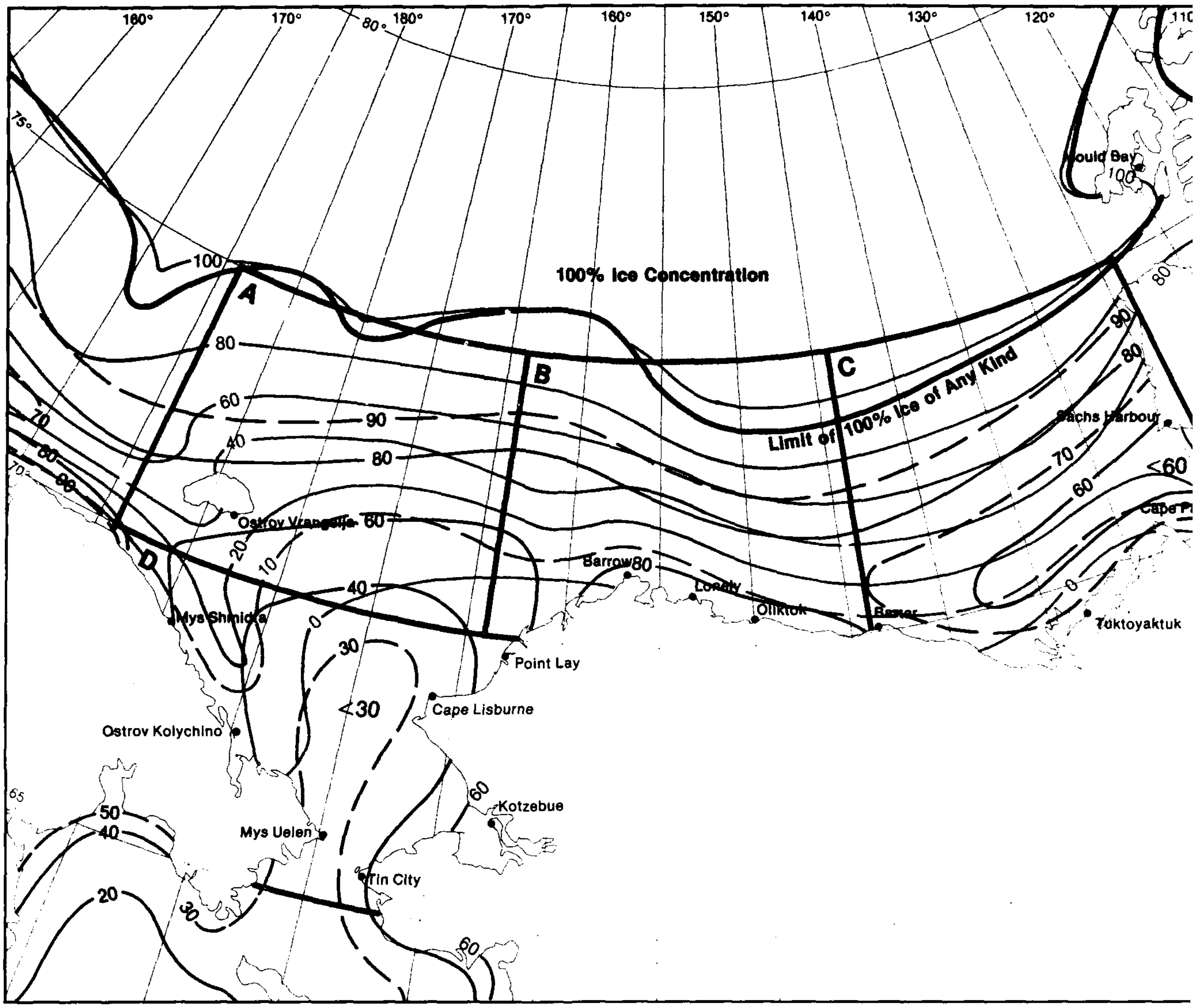
18 Wave Height and Wind
Wave Height ≦3 Feet a

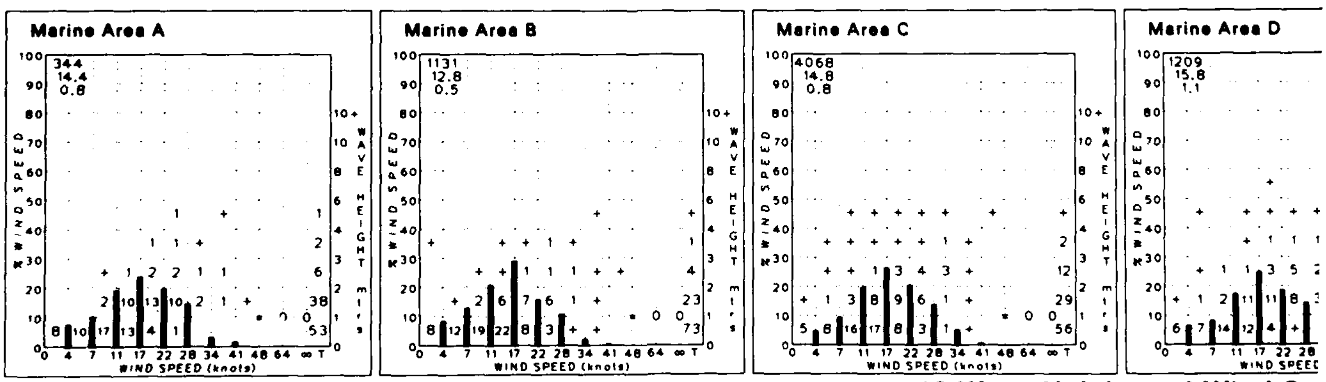


ed
ce ≧5/10ths



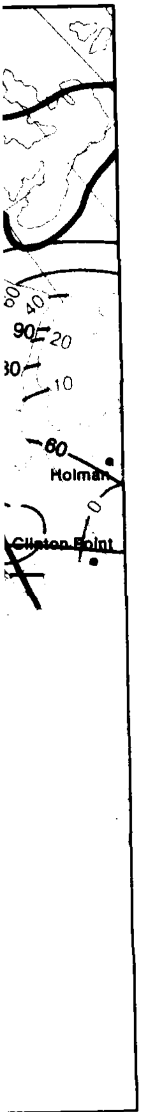
18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths

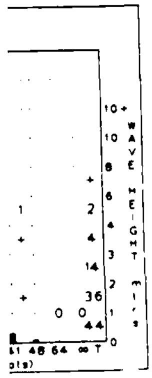




September

18 Wave Height and Wind Sp
Wave Height ≦3 Feet and





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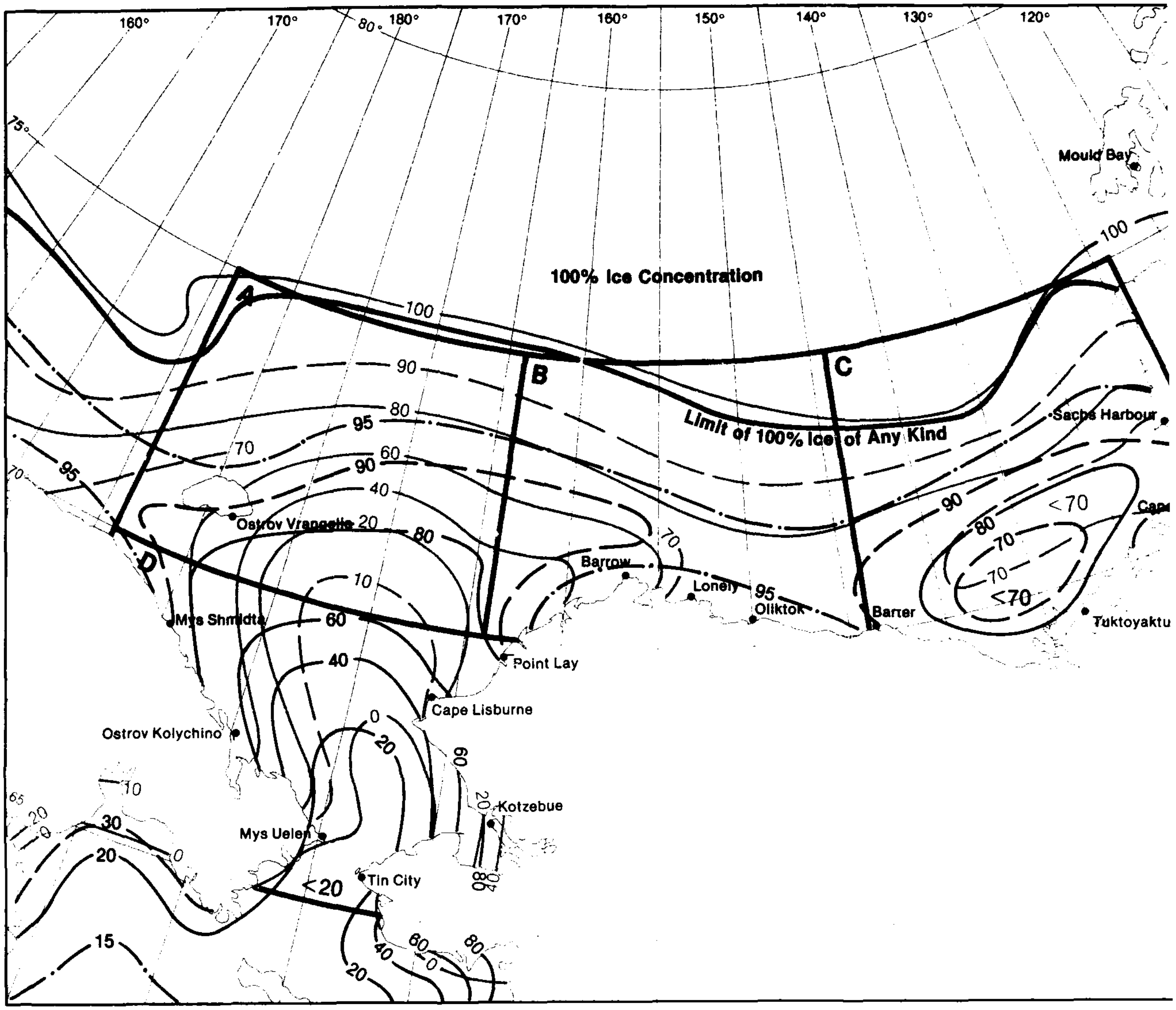
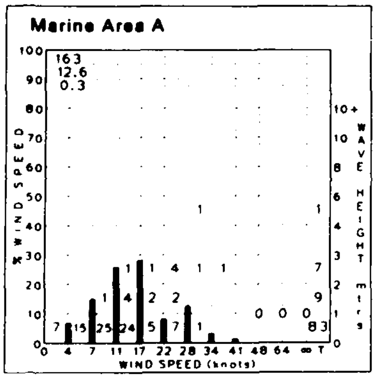
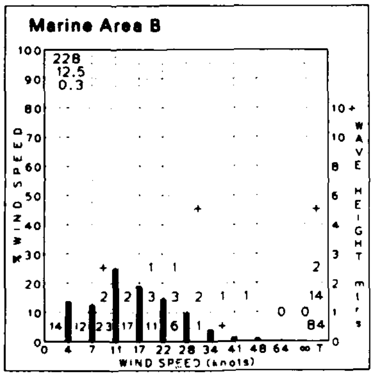
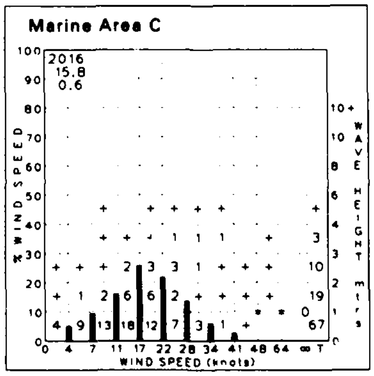
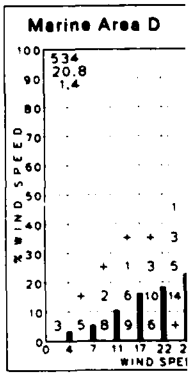
e ≧5/10ths



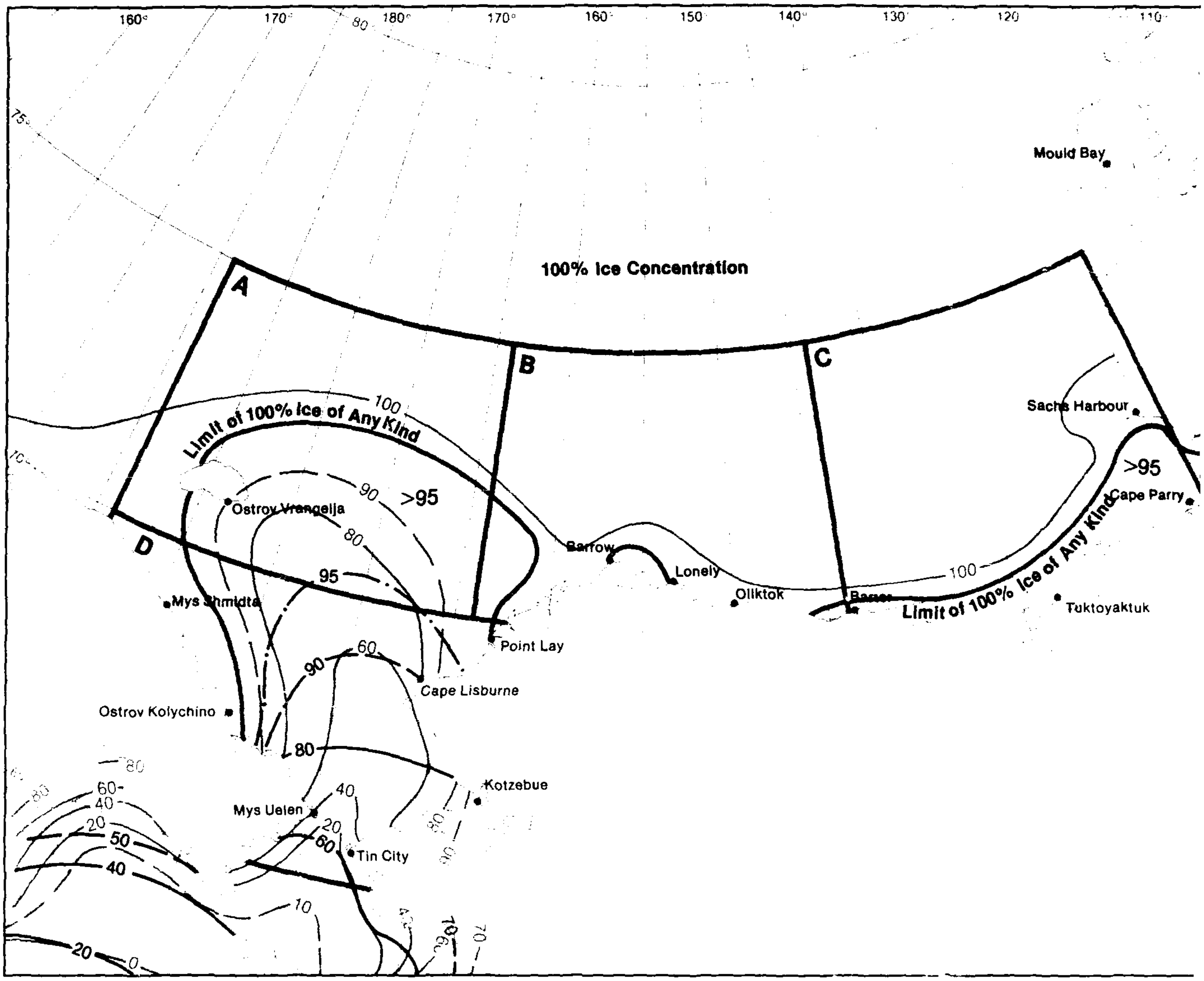






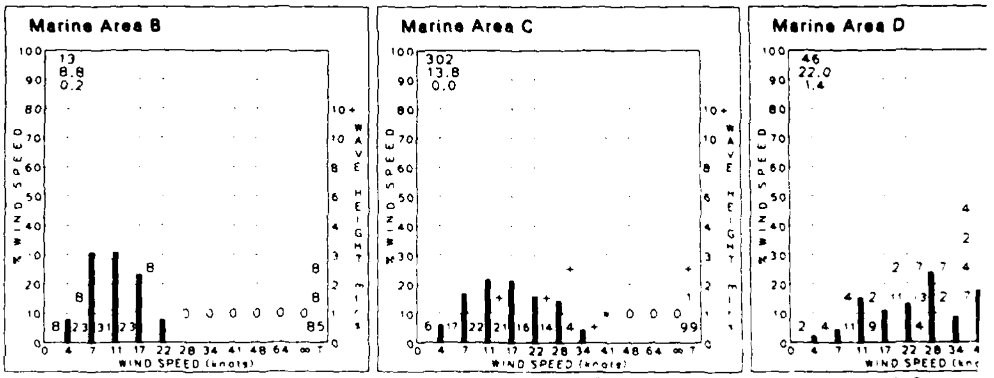


18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths



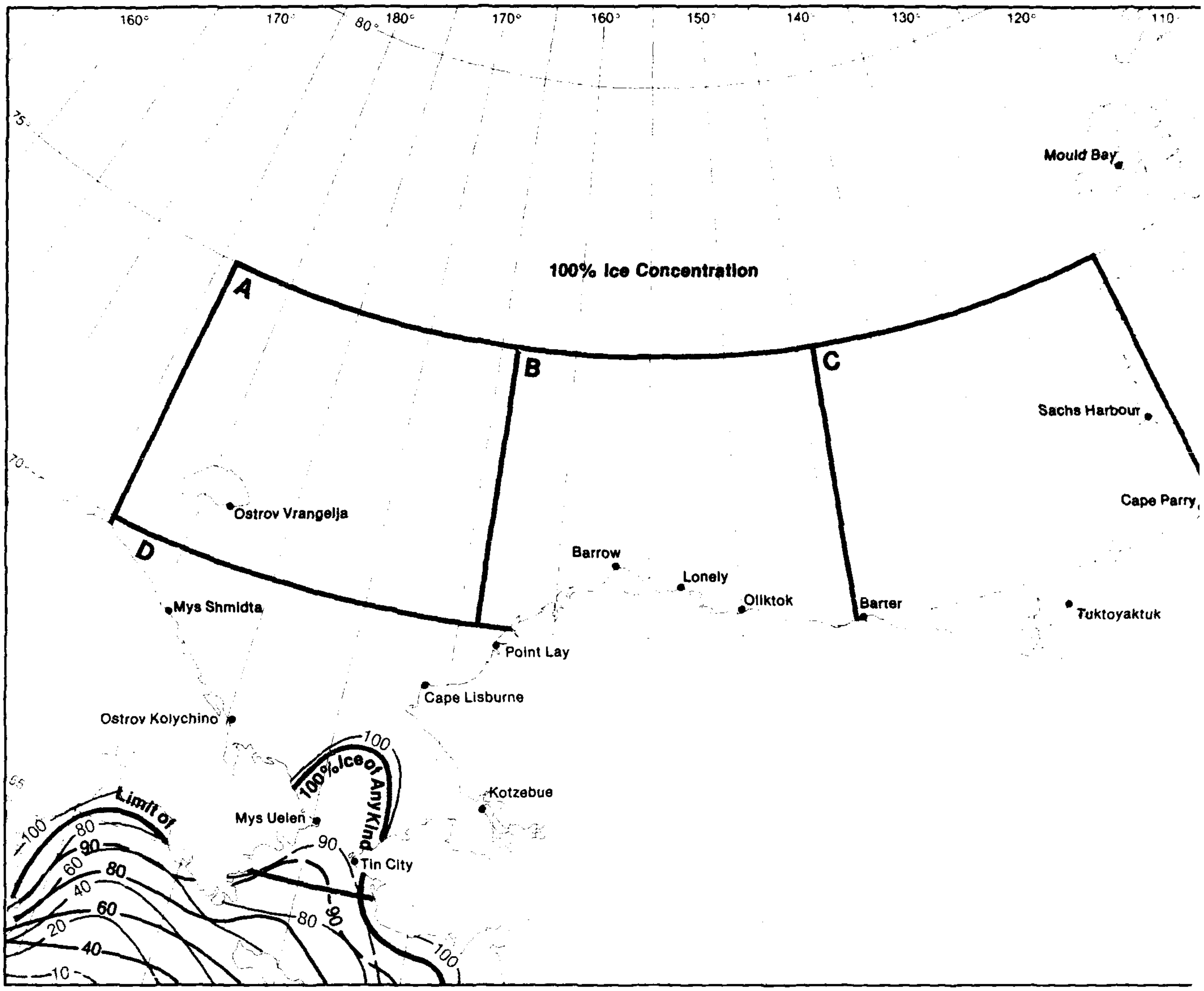
Marine Area A

No Data Available



November

18 Wave Height and Wind Spee
Wave Height ≦3 Feet an Ic



Marine Area A

No Data Available

Marine Area B

No Data Available

Marine Area C

No Data Available

Marine Area D

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18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths

Map 19. Wave height <8 feet and ice thickness ≧8 feet

BLACK LINE – Percent frequency of wave height <8 **feet (2.5 meters).**

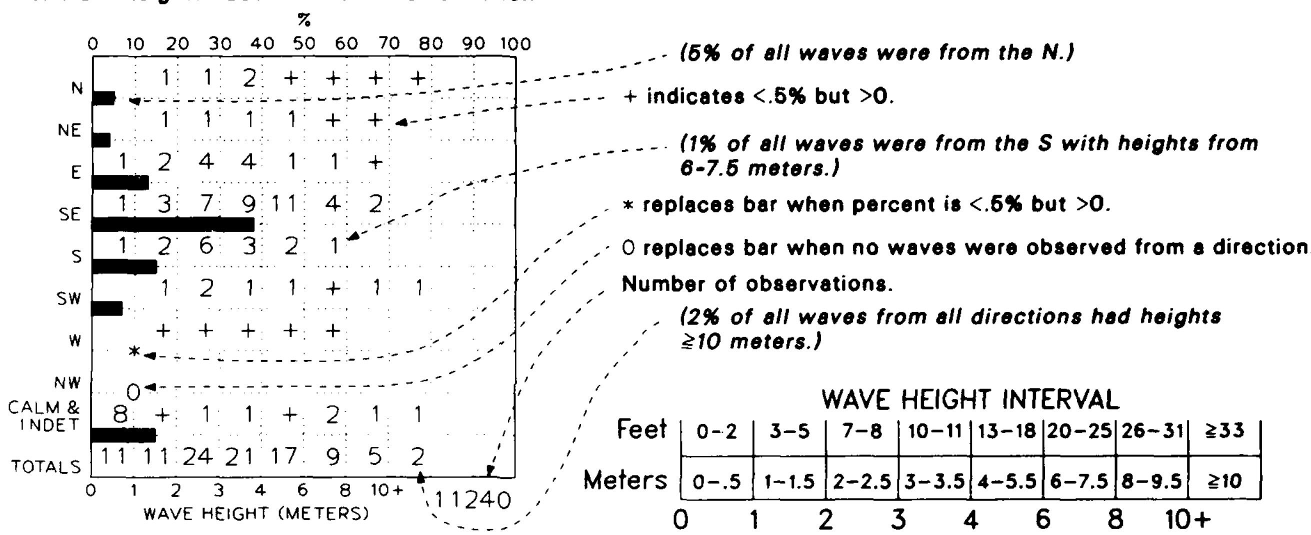
BLUE LINE – Percent frequency of ice thickness ≧8 feet (multi–year ice).

Albers Equal–Area Conic Projection

Graphs: Wave height/direction

Direction frequency (top scale): Bars represent percent frequency of waves from each direction.

Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.



WAVE HEIGHT INTERVAL

Feet	0–2	3–5	7–8	10–11	13–18	20–25	26–31	≥33
Meters	0–.5	1–1.5	2–2.5	3–3.5	4–5.5	6–7.5	8–9.5	≥10

0 1 2 3 4 6 8 10+

Printed scale on bottom of chart

The observer aboard ship determines and records the period and height of wind waves (sea); and the direction, pe height of swell waves. Sea waves are waves raised by the local wind and are assumed to have the same direction as t Swell waves are waves not raised by the local wind, but rather by distant wind systems or by winds that have sinced c blow. Swell waves characteristically exhibit more regular and longer periods, and have flatter crests than wind wave their generating area (fetch). Sea and swell waves occur singly or in manifold combination from which they can some separated only with difficulty.

Indeterminate directions are combined with calms in the direction scale of the graph (they can be distinguishec sulting the sea height scale). The number of observations noted on the graphs is from the higher of sea or swell when reported; if the heights were equal, then the one with the longer period was selected. If only one wave was reported (sea then that value was used. Refer to the texts of Sets 14 and 18-21 for complete information on waves, and to the introduc section of Section II for sea ice information.

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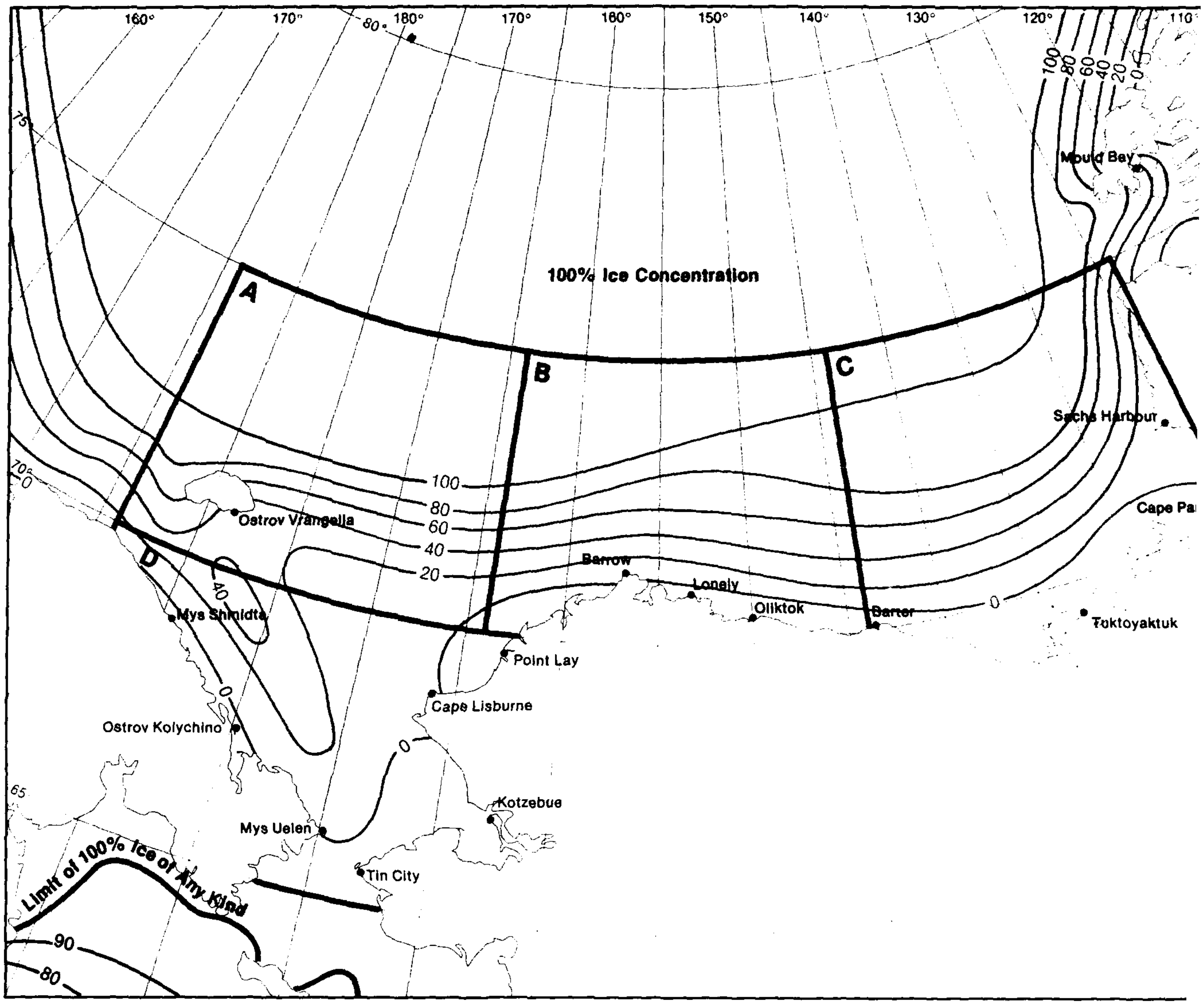
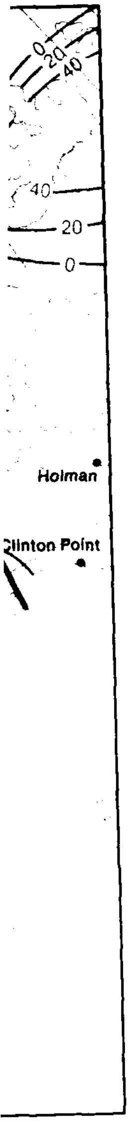


Marine Area A	Marine Area B	Marine Area C	Marine Area D
No Data Available	No Data Available	No Data Available	No Data

January

19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickr



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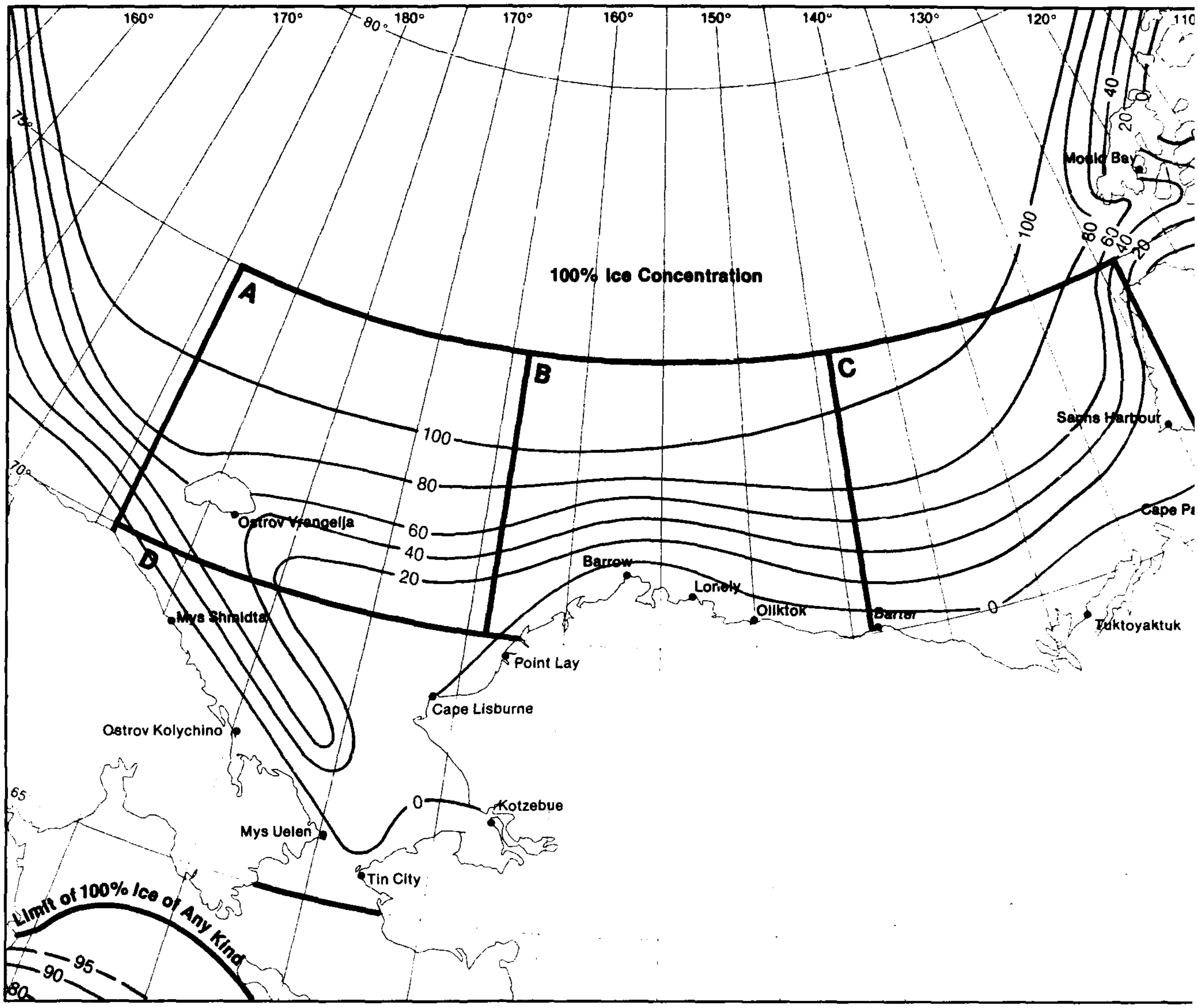
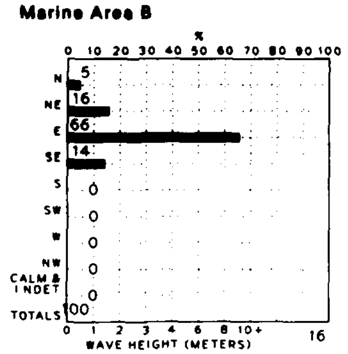
s ≧8 Feet



Marine Area A

No Data Available

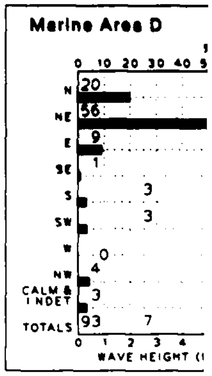
Marine Area B



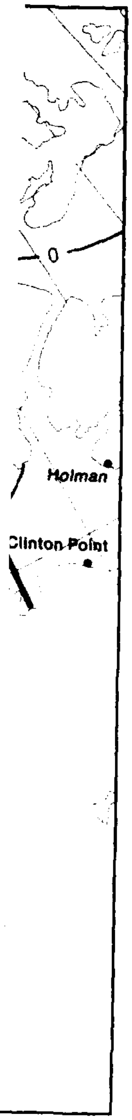
Marine Area C

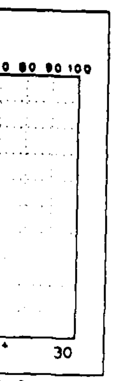
No Data Available

Marine Area D

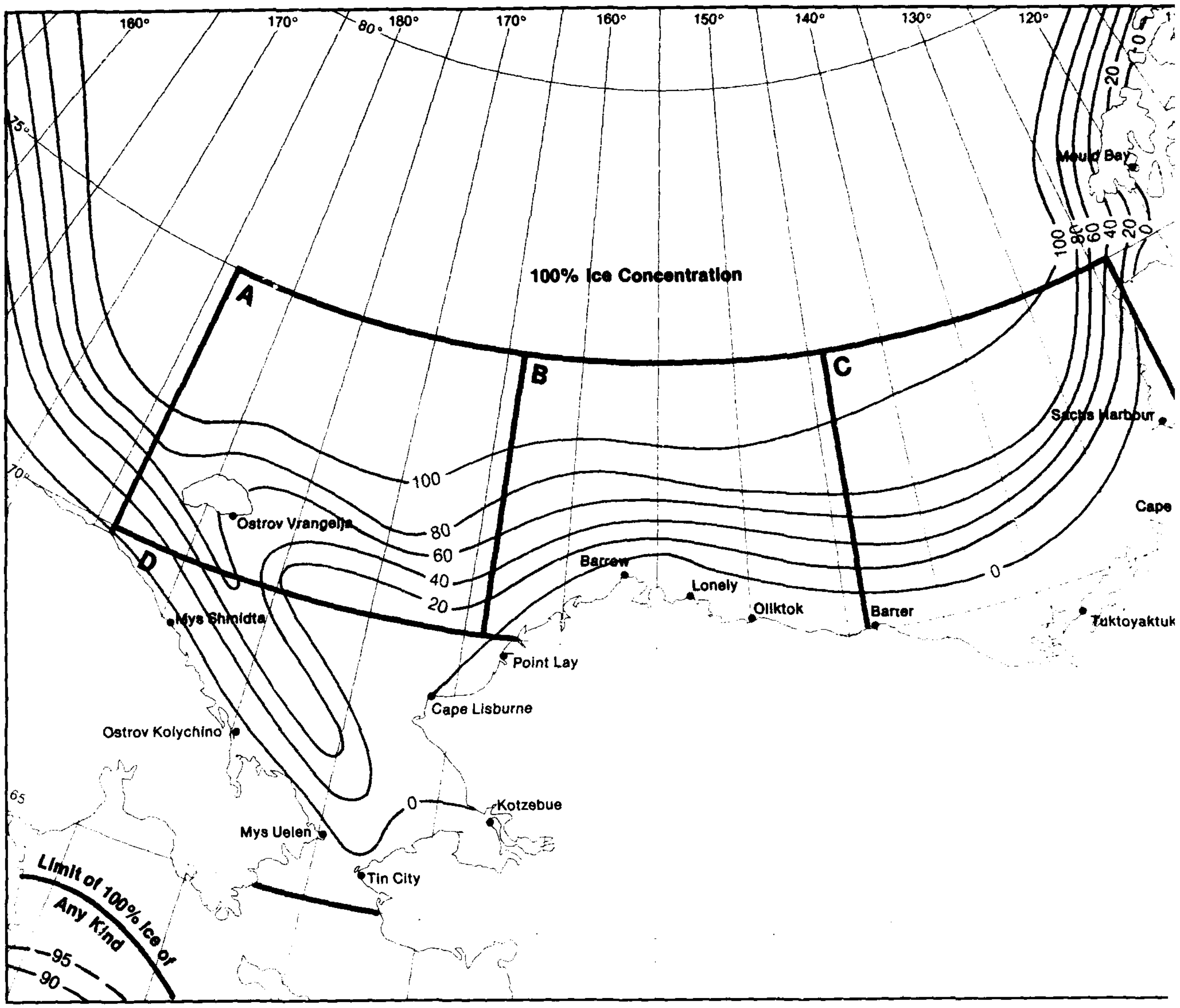


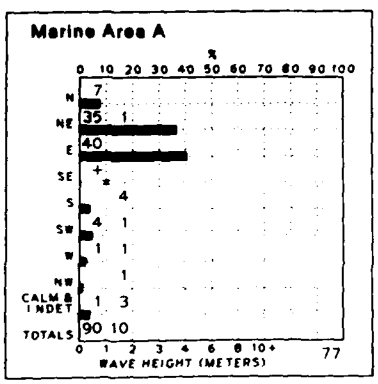
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet

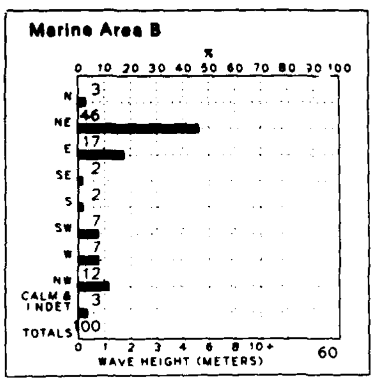


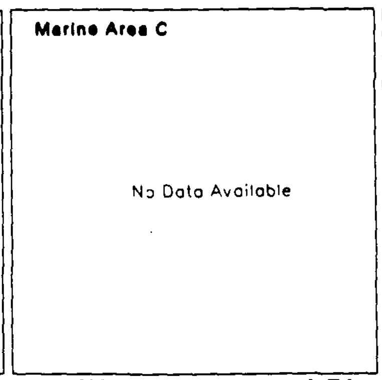


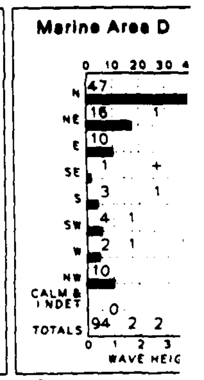
ebruary





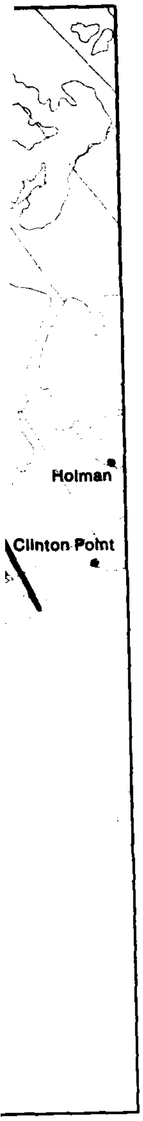


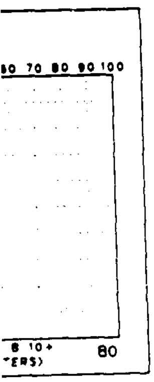




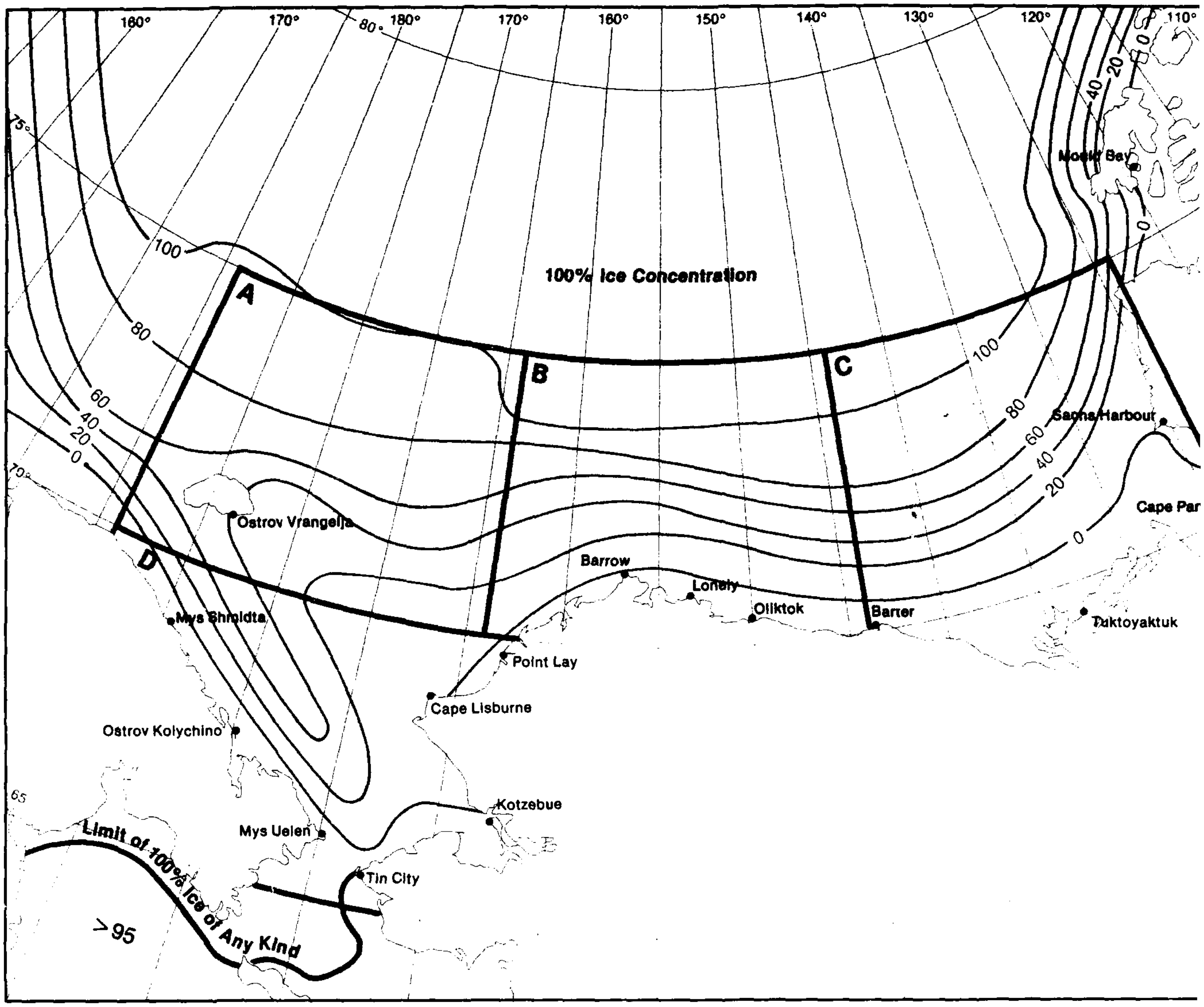
March

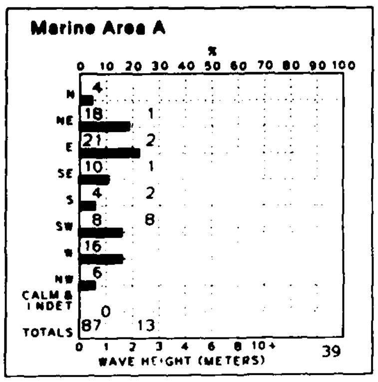
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thic





ss ≧8 Feet



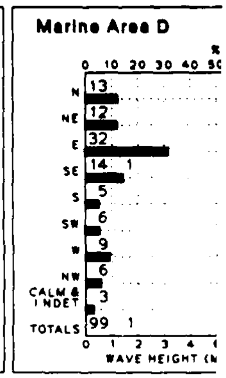


Marine Area B

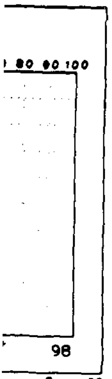
No Data Available

Marine Area C

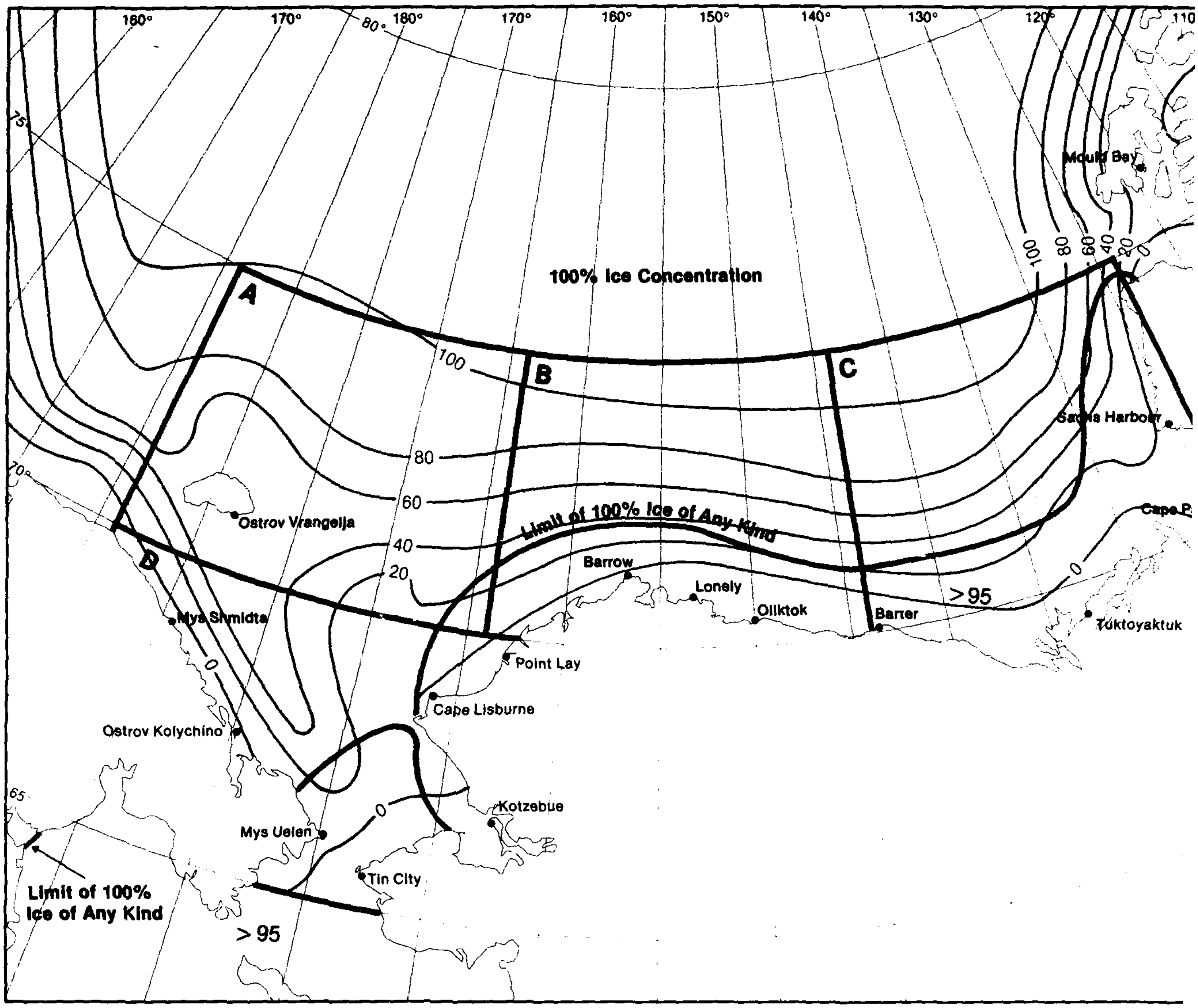
No Data Available



19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet



April



Marine Area A

No Data Available

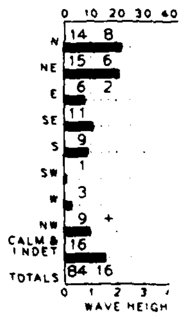
Marine Area B

No Data Available

Marine Area C

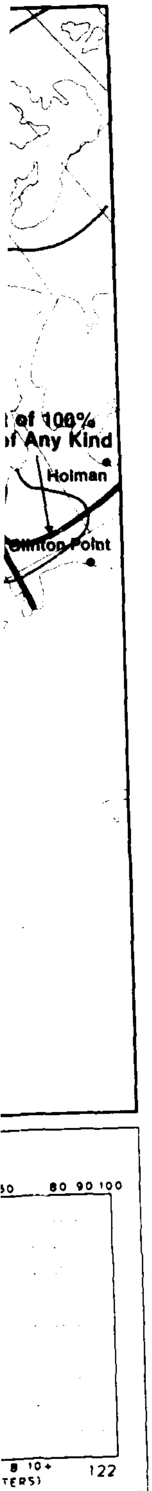
No Data Available

Marine Area D

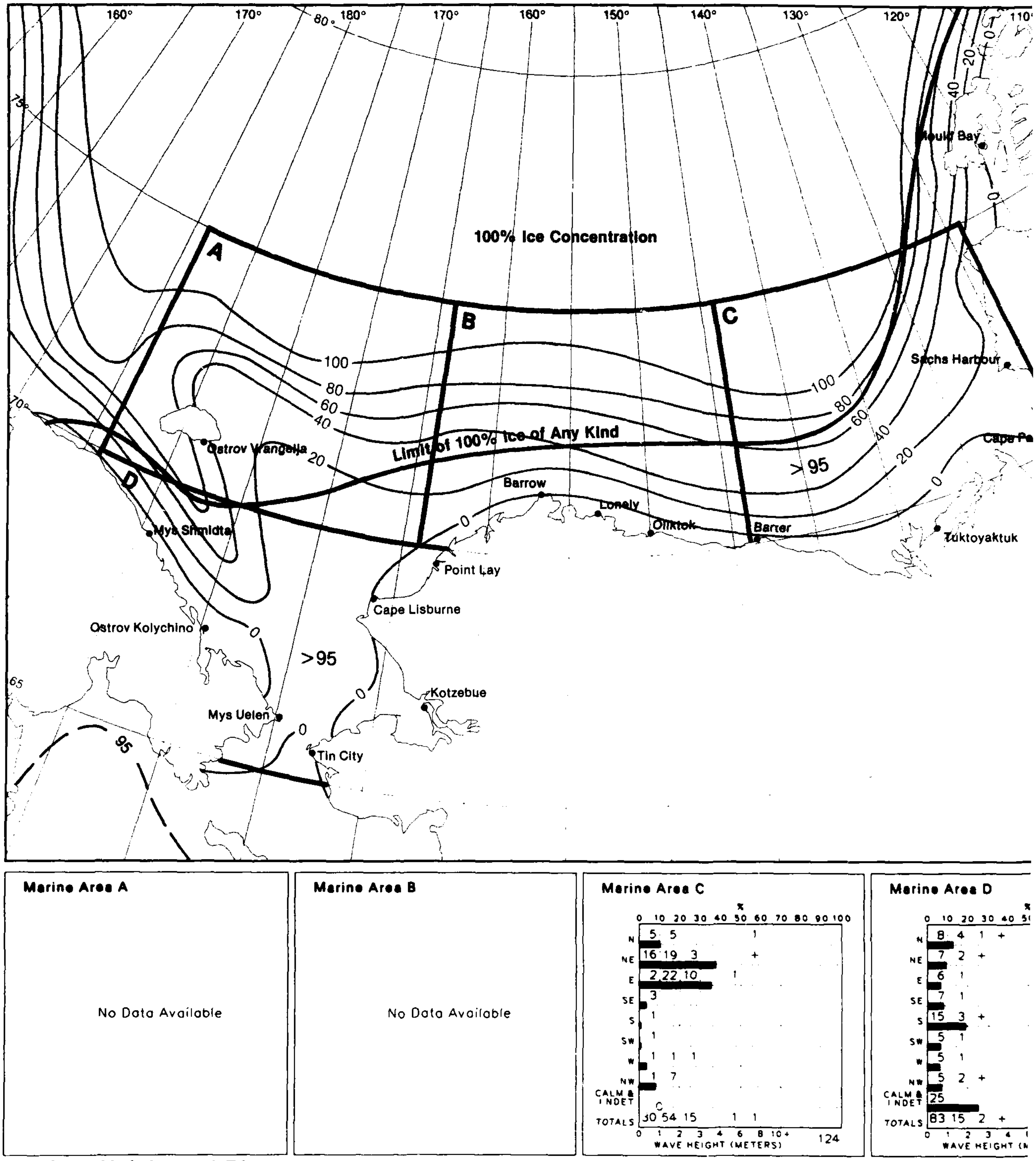


May

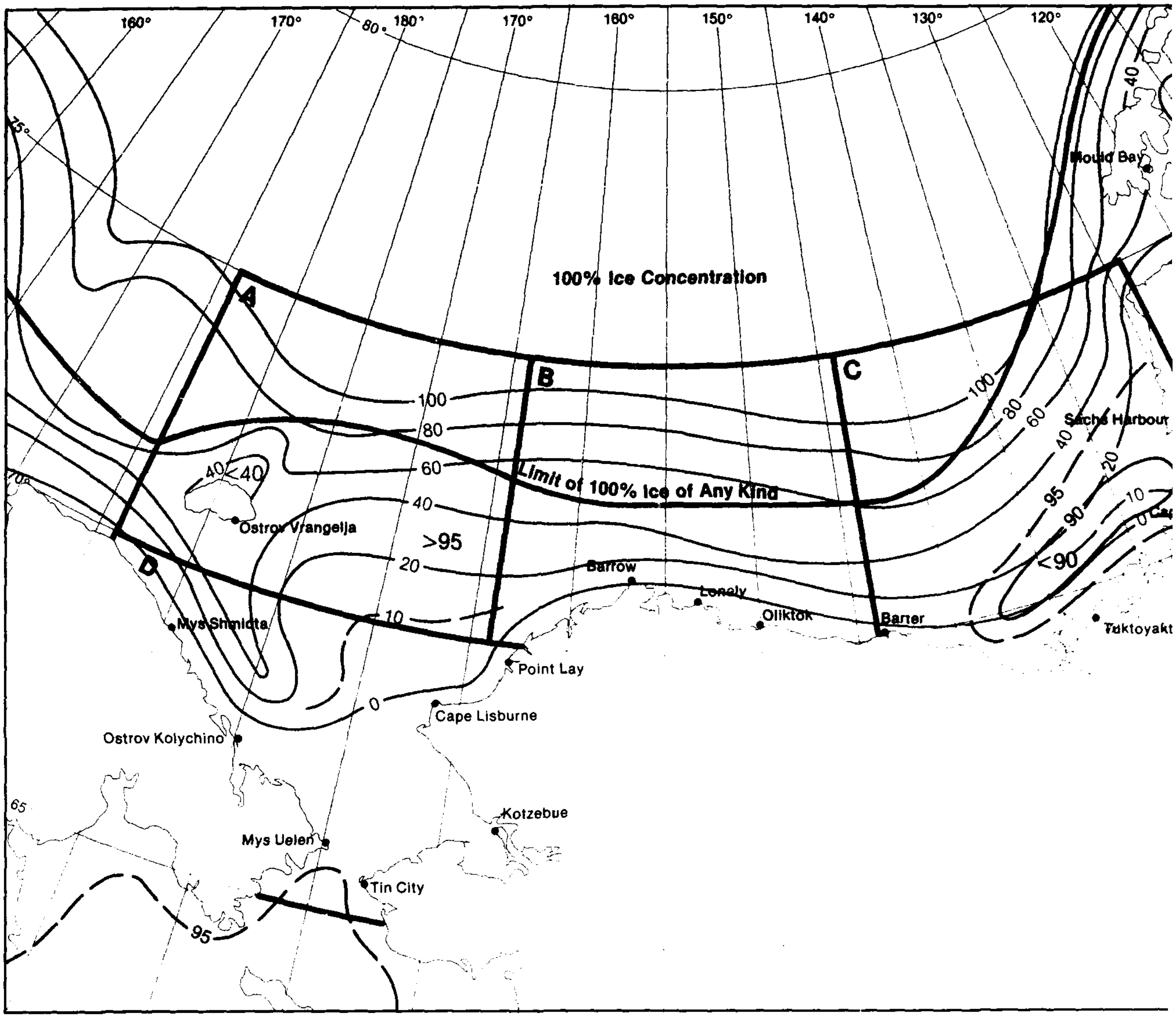
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thicl



ss ≧8 Feet



19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet



Marine Area A (%; wave height in meters; 200)

Direction	0–1	1–2	2–3	3–4	4–6	6–8	8–10	10+
N	5	+						
NE	11	3	+					
E	24	8	1					
SE	5	3						
S	7	2	+					
SW	4	2	+					
W	4							
NW	4	+						
CALM & INDET	15							
TOTALS	79	19	1					

Marine Area B (%; wave height in meters; 1115)

Direction	0–1	1–2	2–3	3–4	4–6	6–8	8–10	10+
N	6	+	+		+			
NE	14	2	+	+				
E	17	2	+	+				
SE	5	+						
S	3	1	+	+				
SW	7	1	+	+				
W	9	2	+	+	+			
NW	4	1	+		+			
CALM & INDET	24							
TOTALS	88	9	1	1	1			

Marine Area C (%; wave height in meters; 1638)

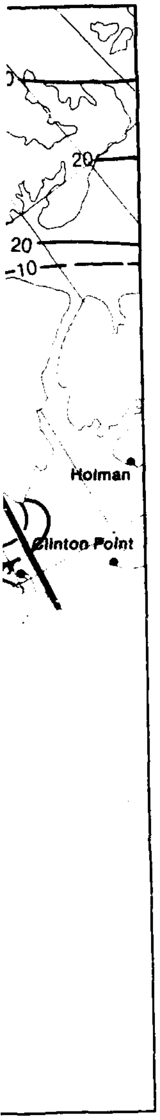
Direction	0–1	1–2	2–3	3–4	4–6	6–8	8–10	10+
N	6	2	+					
NE	11	4	+					
E	17	9	2	+	+			
SE	6	2	+	+				
S	4	+			+			
SW	3	1	+		+			
W	8	4	1	1				
NW	10	3	1	1	+	+		
CALM & INDET	4							
TOTALS	68	24	6	2	+	+		

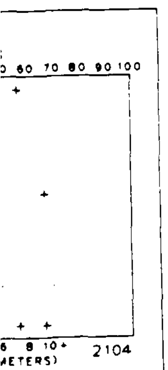
Marine Area D (%; wave height in meters)

Direction	0–1	1–2	2–3
N	8	7	2
NE	5	3	1
E	4	1	+
SE	5	3	+
S	8	10	1
SW	5	4	+
W	3	1	+
NW	5	3	1
CALM & INDET	16	+	
TOTALS	59	33	6

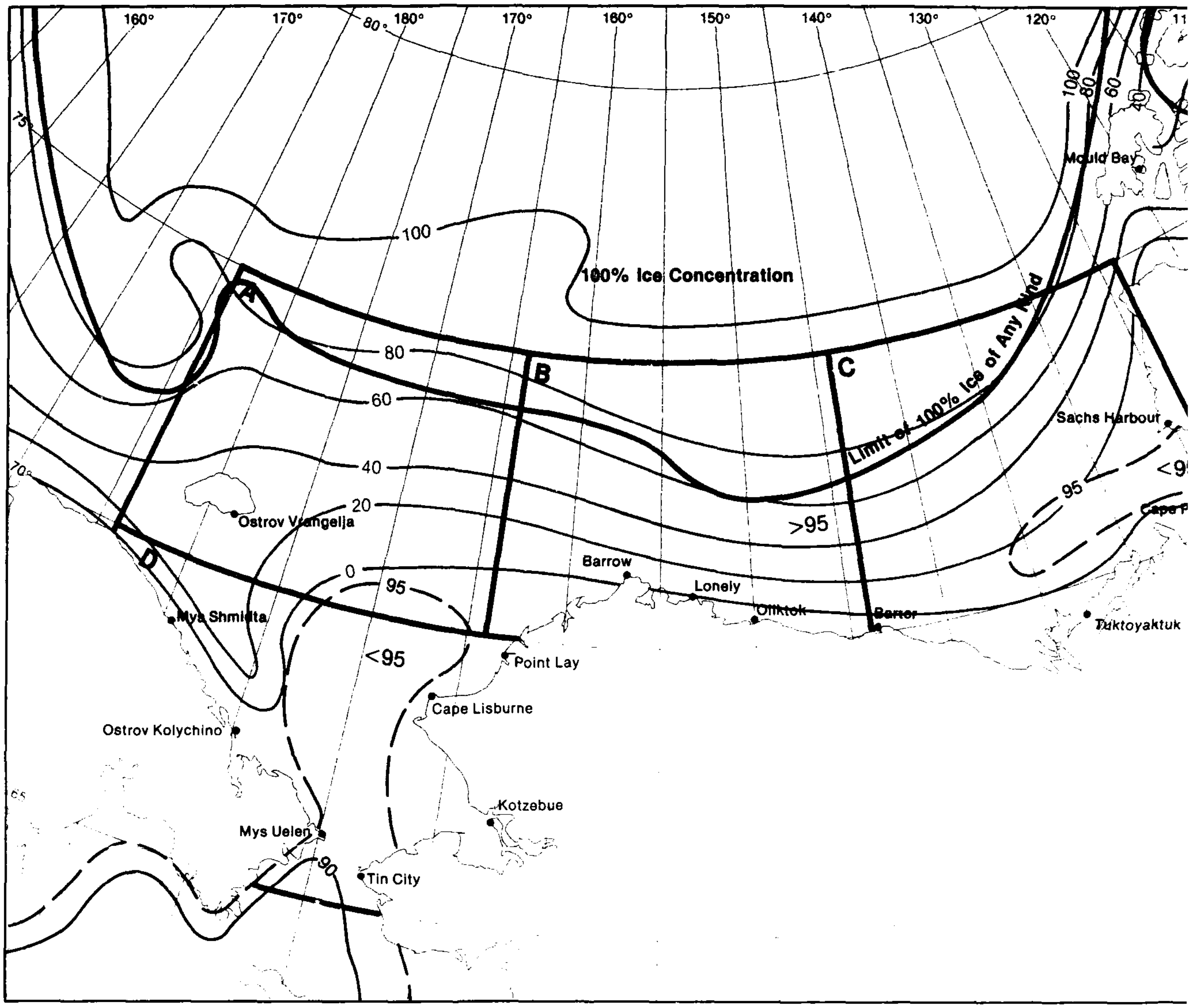
July

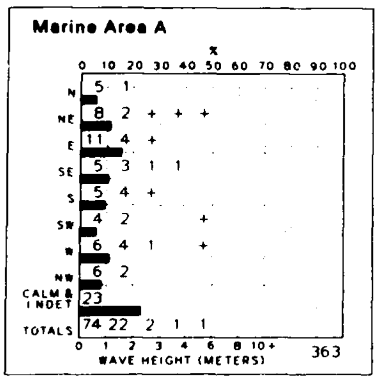
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thi

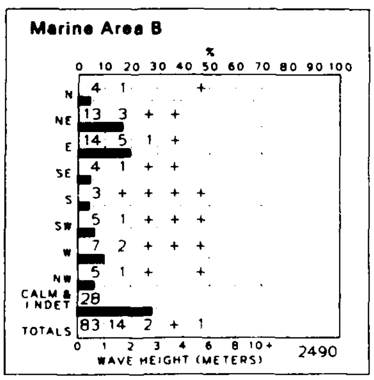


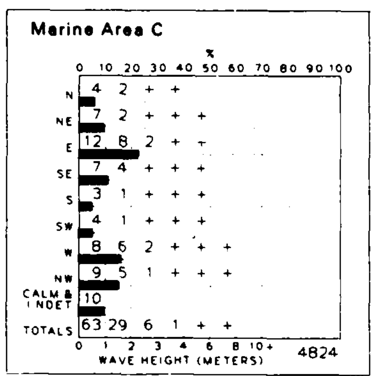


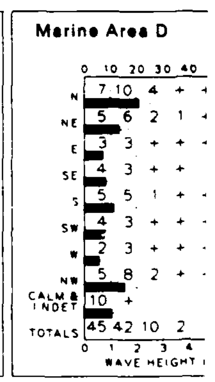
ess ≧8 Feet



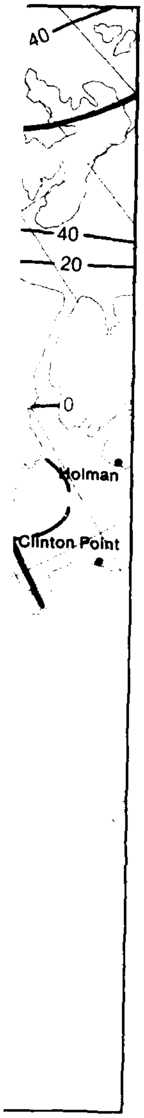


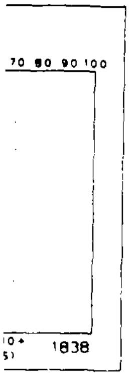




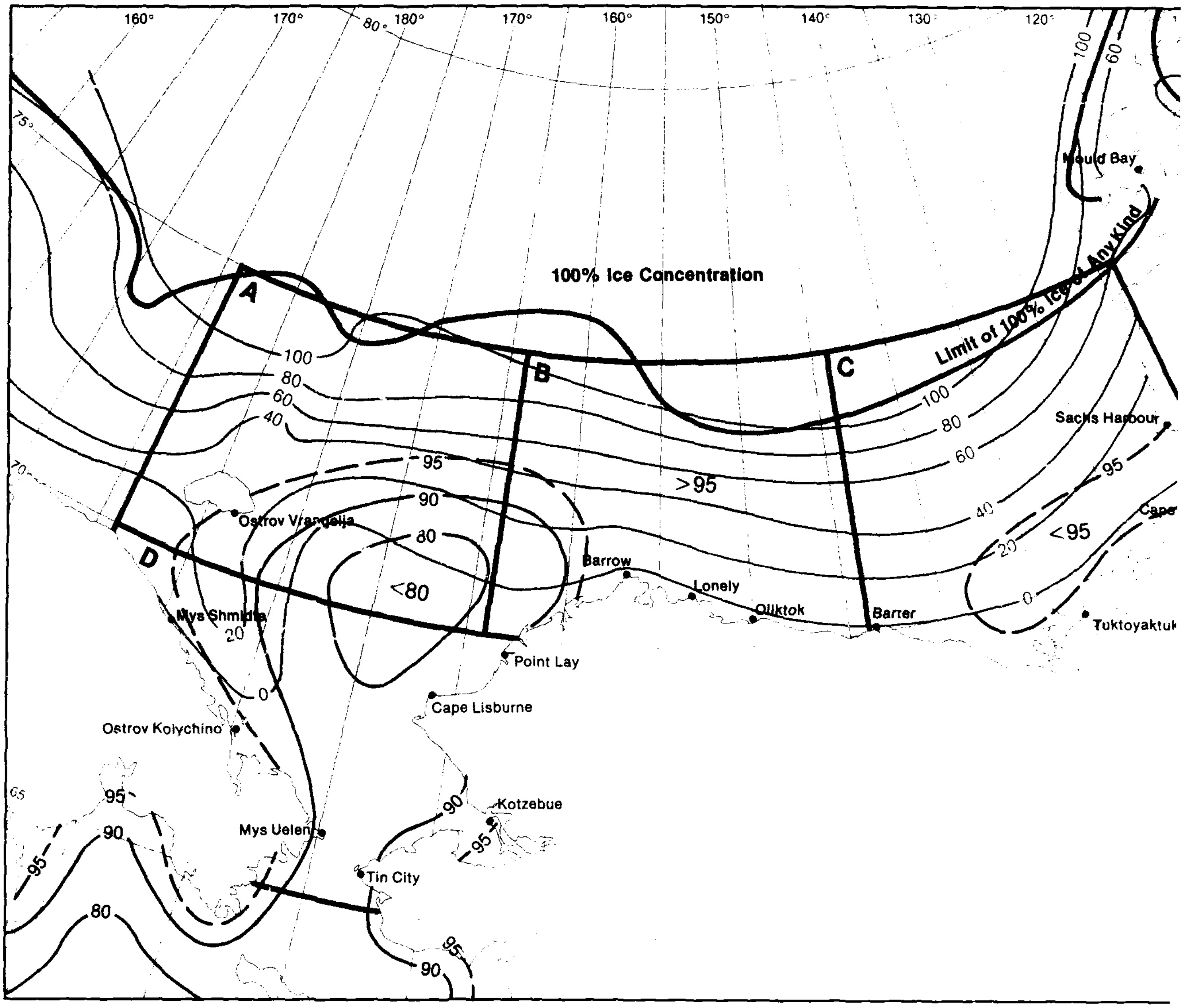


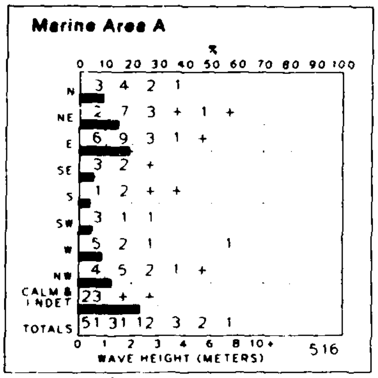
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet

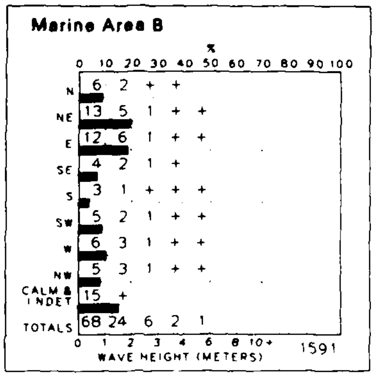


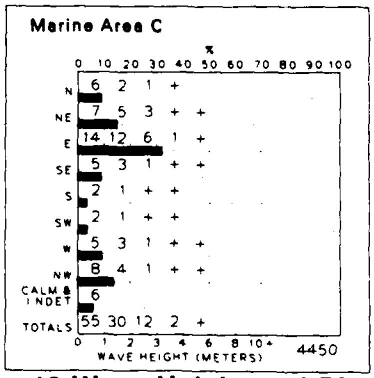


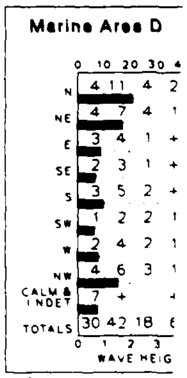
August





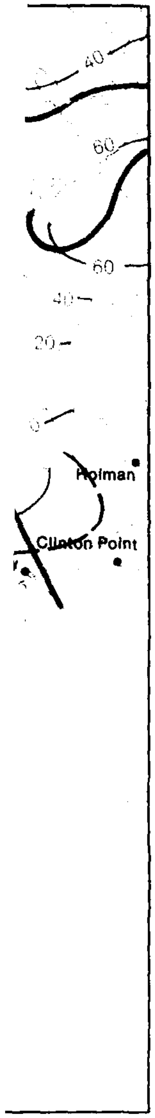


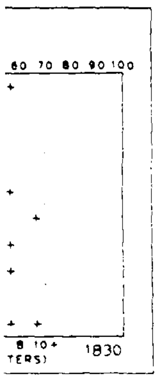




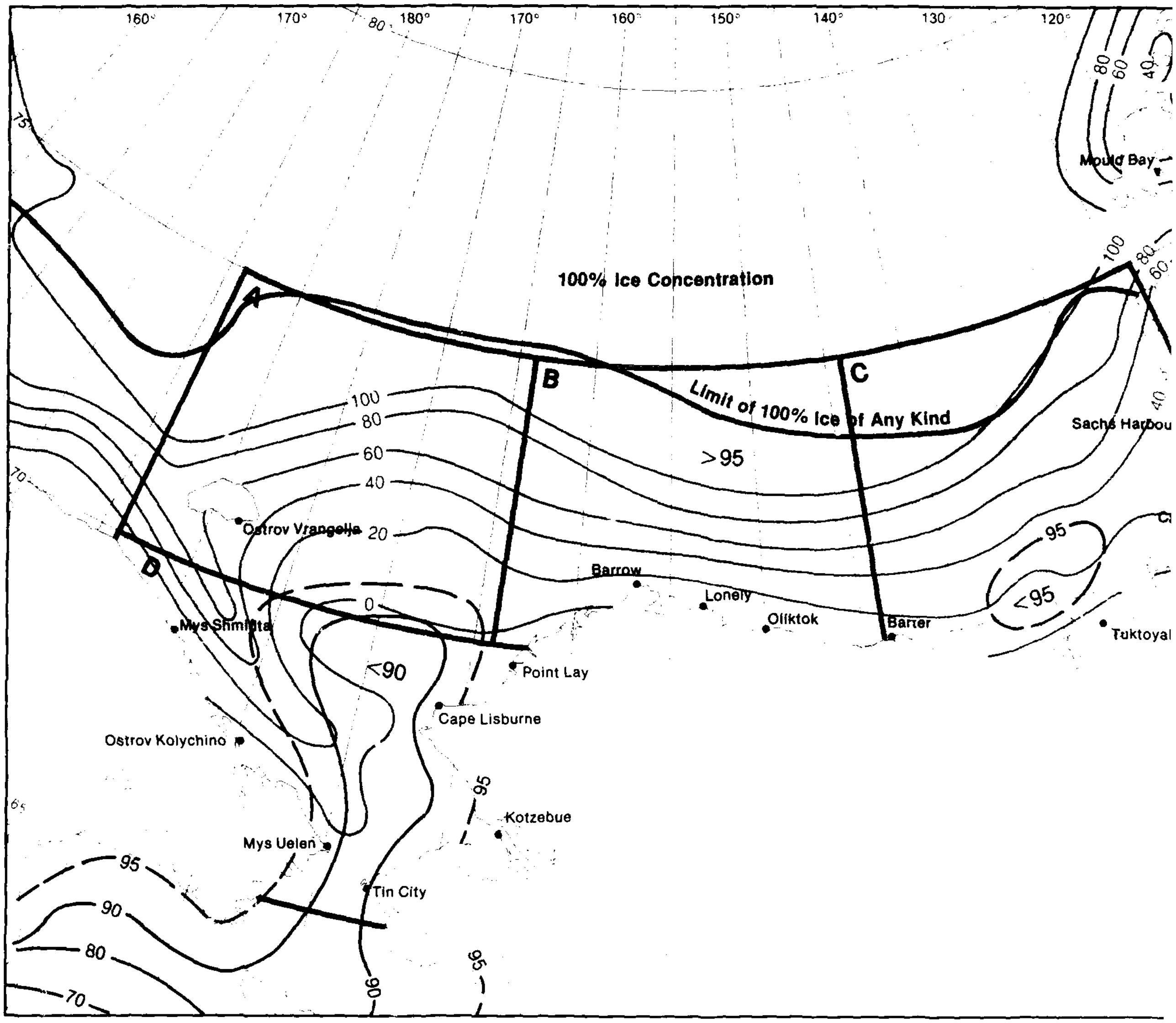
September

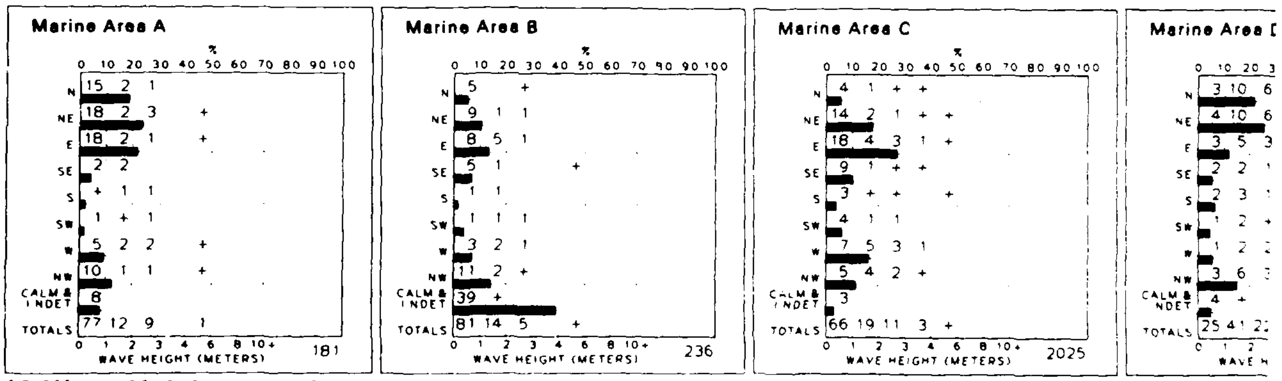
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thic



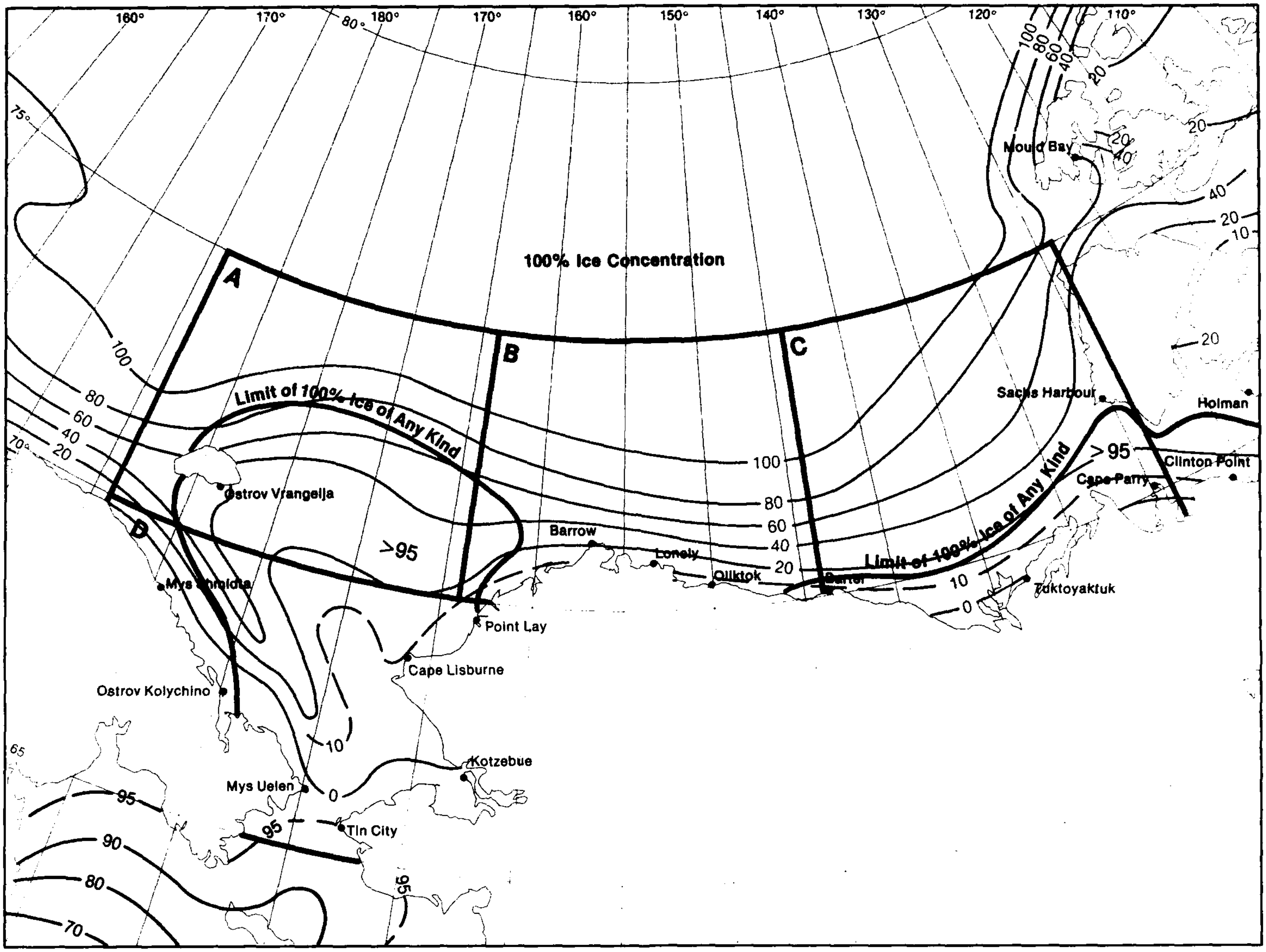


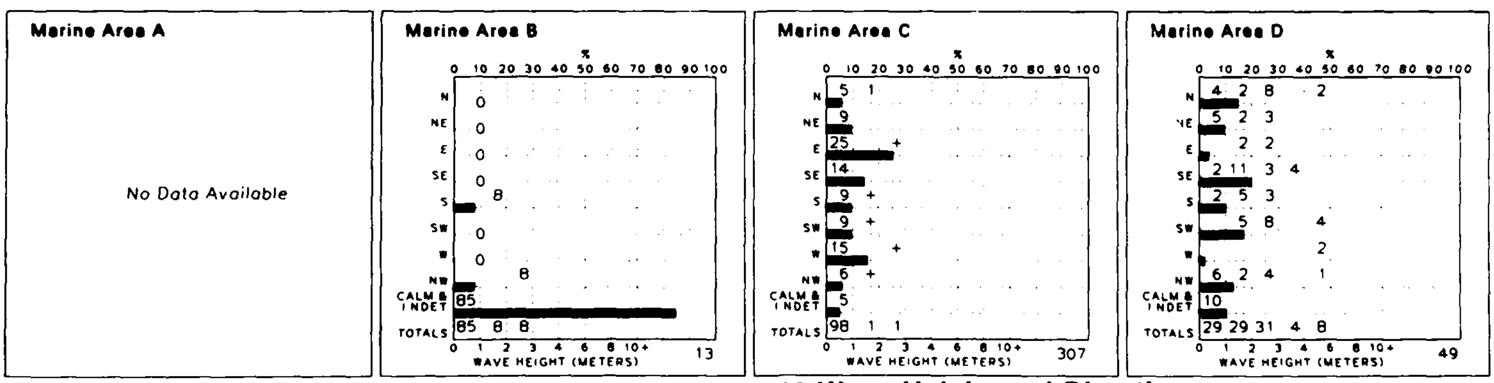
ss ≧8 Feet





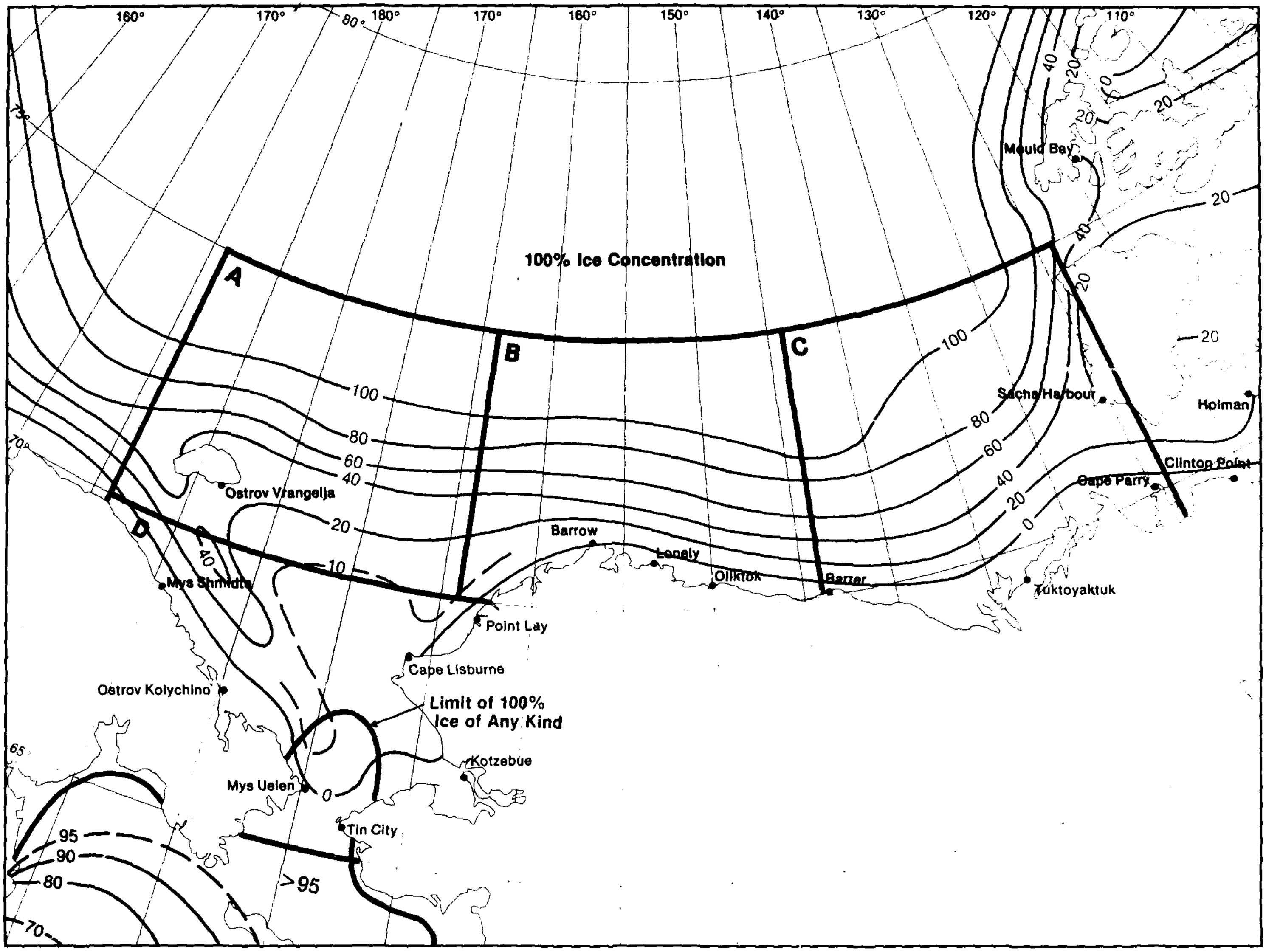
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet





November

19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet



Marine Area A	Marine Area B	Marine Area C	Marine Area D
No Data Available	No Data Available	No Data Available	No Data Available

19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet

December

Map 20. Wave height ≧12 and ≧20 feet

BLACK LINE – Percent frequency of wave height ≧12 feet (≧3.5 meters).

BLUE LINE – Percent frequency of wave height ≧20 feet (≧6 meters).

Albers Equal–Area Conic Projection

Graphs: Wave height/period

Percent frequency of occurrence of wave period and height.

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6–7	8–9	10–11	12–13	>13	IND
0–.5	21	3	1	+	+	+	6
1–1.5	22	16	6	2	1	+	+
2–2.5	3	6	4	3	1	+	+
3–3.5	+	1	1	1	1	+	+
4–5.5	+	+	+	+	+	+	0
6–7.5	0	+	+	0	0	+	0
8–9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	+	0

4010

+ indicates <.5% but >0.

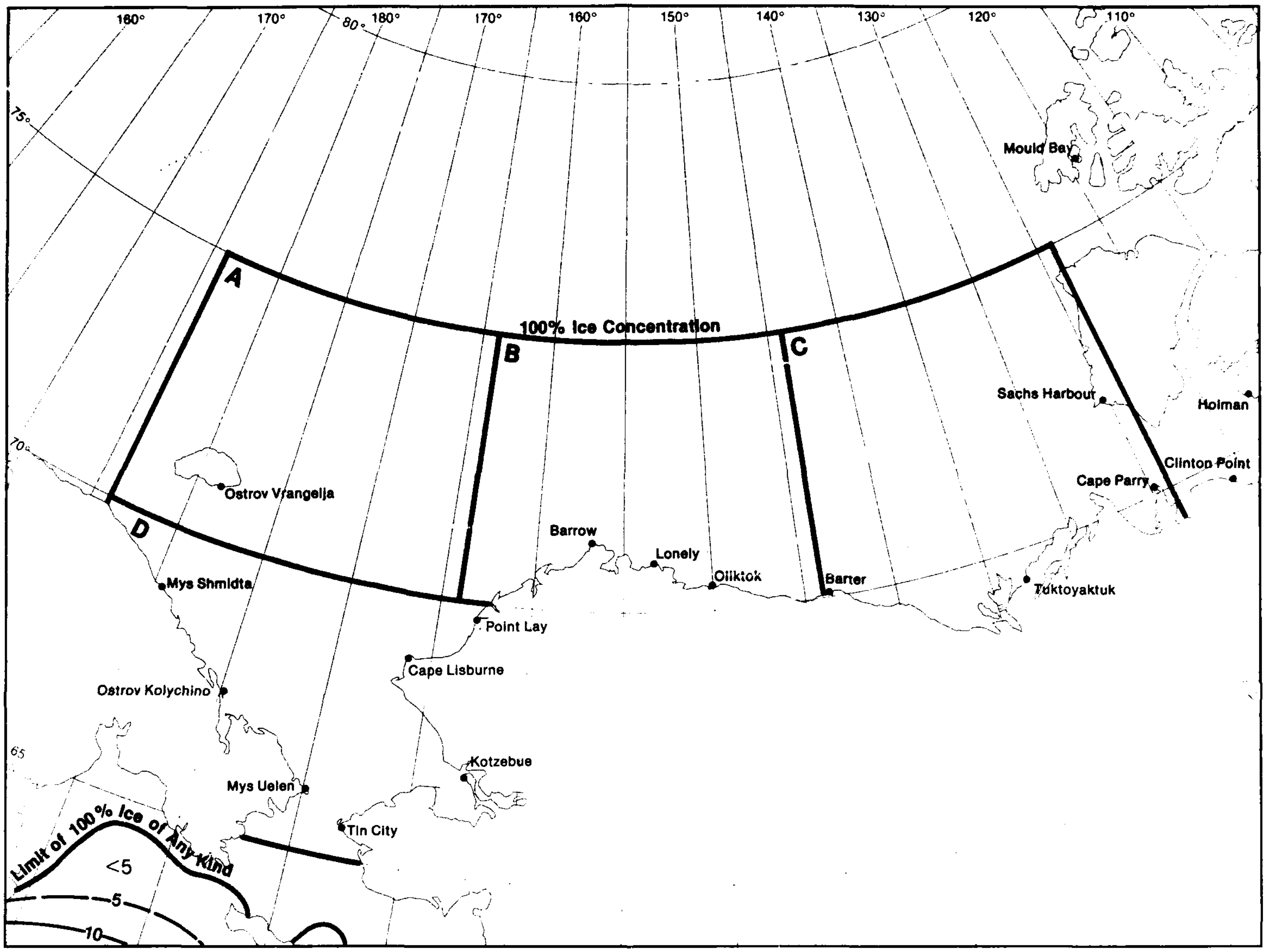
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

Number of observations.

Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.

Wave period is the interval in seconds between the passage of two successive crests or troughs of well-formed waves past a fixed point. Waves in the same system usually occur in a sequence of a few large, well-formed waves followed by an interval in which only small and poorly-formed waves occur, and another series of well-formed waves, etc. Observers aboard ship determine the values of wave height, period, and direction generally using only the well-formed waves and ignoring poorly-formed waves. To describe a similar sea state from a measured wave record, a statistical approach is used to describe the significant wave height ($\overline{H}$ 1/3) which is the average of the highest one-third of the measured waves. This roughly approximates the characteristic height observed visually from aboard ship. To determine the period of wind waves or swell, the observer needs only to select a distinctive patch of foam or a small floating object at some distance from the ship. As the object falls astern, a new one is selected. The elapsed time is determined to the nearest second between the instant when the object is on the crest of the first and of the last well-formed wave in the group. Noting the number of crests that pass under the object during the interval permits computation of the average period. An experienced observer needs only to observe a few representative wave "sets" to derive the average period.

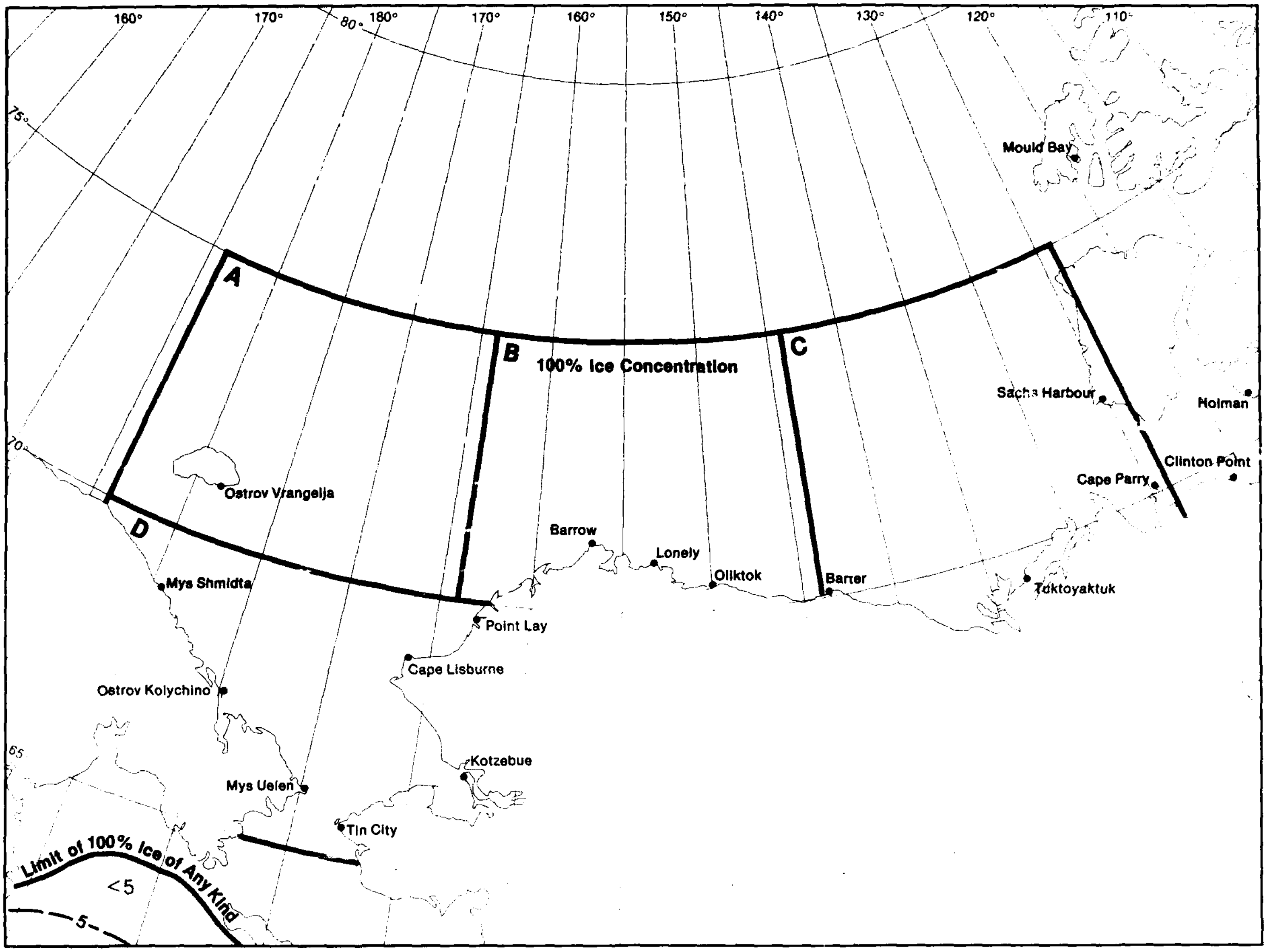
The number of observations noted on the graphs is that of those observations reporting both wave height and period. The wave height isopleth presentations are for a generally hazardous sea condition (wave heights equal to or greater than 12 feet). Refer to the texts of Sets 14 and 18-21 for complete information on waves.



Marine Area A	Marine Area B	Marine Area C	Marine Area D
No Data Available	No Data Available	No Data Available	No Data Available

January

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet



Marine Area A

No Data Available

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13						88
1-1.5							
2-2.5							
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≧10							

16

Marine Area C

No Data Available

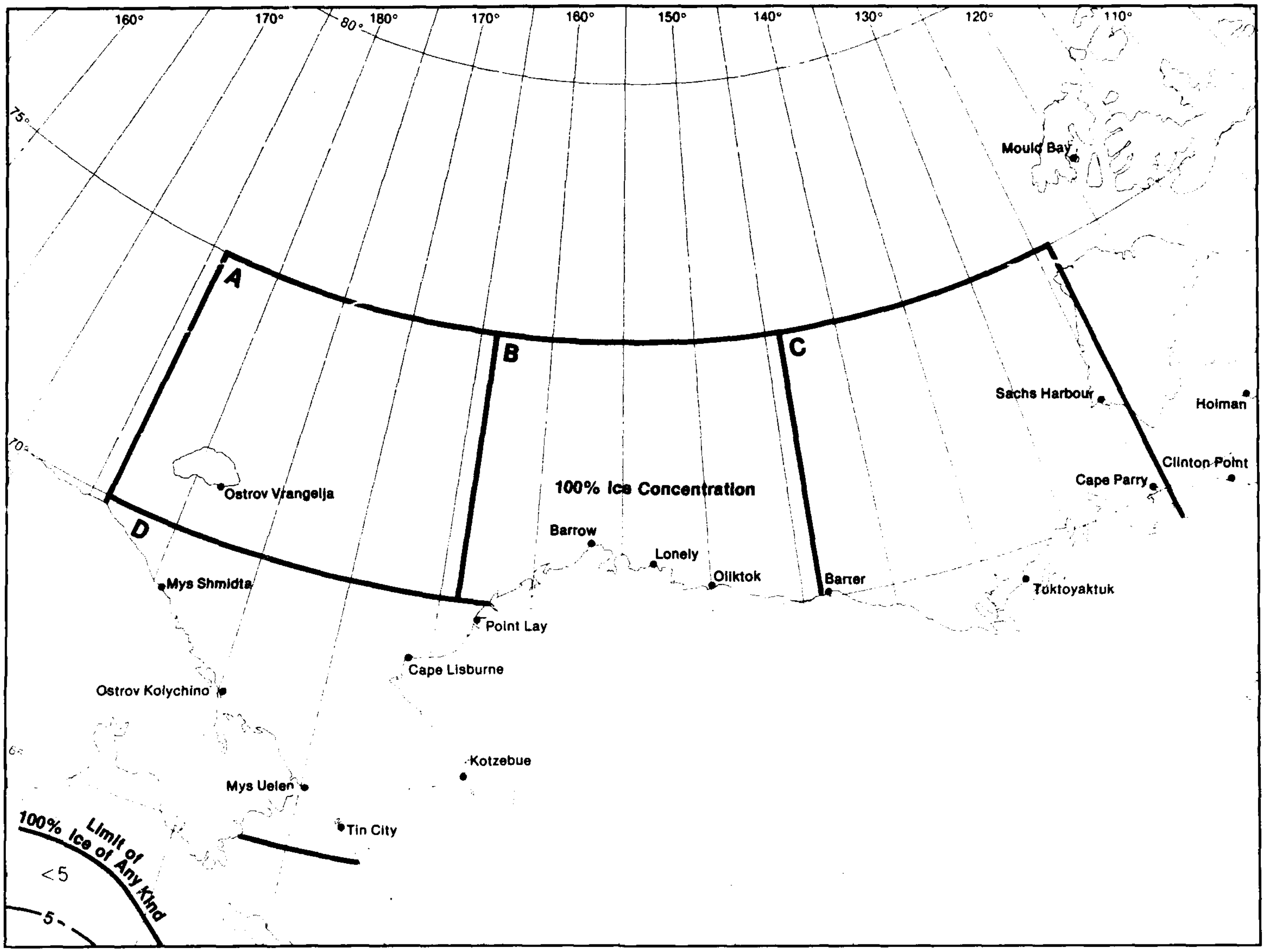
Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	3					83
1-1.5							
2-2.5		3		3			
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≧10							

30

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

February



Marine Area A

WAVE HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9						81
1-1.5	5				1		4
2-2.5							
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≥10							

PERIOD (sec)

77

Marine Area B

WAVE HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10						90
1-1.5							
2-2.5							
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≥10							

PERIOD (sec)

60

Marine Area C

No Data Available

Marine Area D

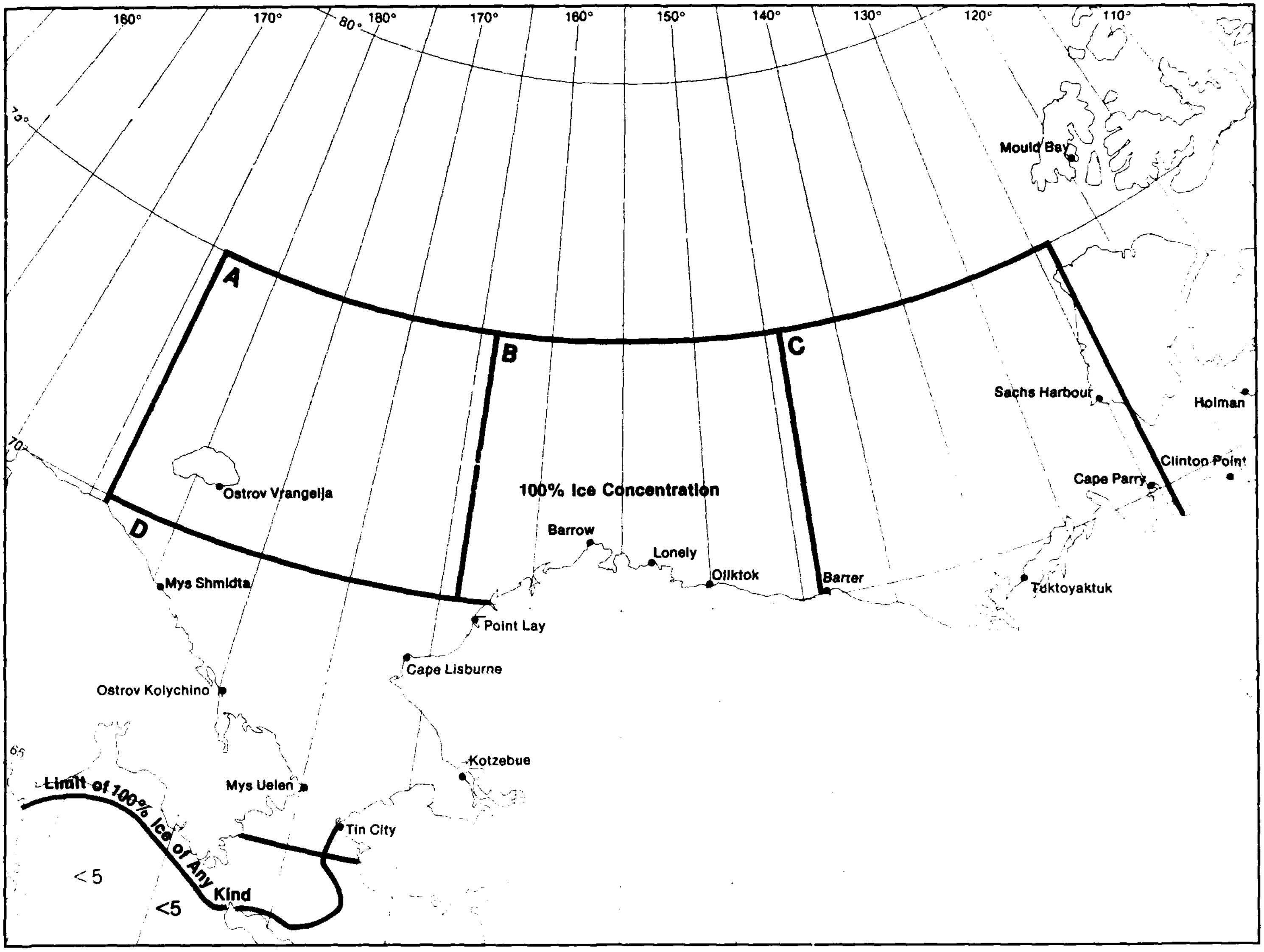
WAVE HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5							94
1-1.5	1						1
2-2.5		2					
3-3.5		1					
4-5.5							
6-7.5							
8-9.5							
≥10							

PERIOD (sec)

80

March

20 Wave Height and Period
Wave Height ≧ 12 and ≧20 Feet



Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	26						62
1-1.5							
2-2.5	5	5		3			
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≥10							

39

Marine Area B

No Data Available

Marine Area C

No Data Available

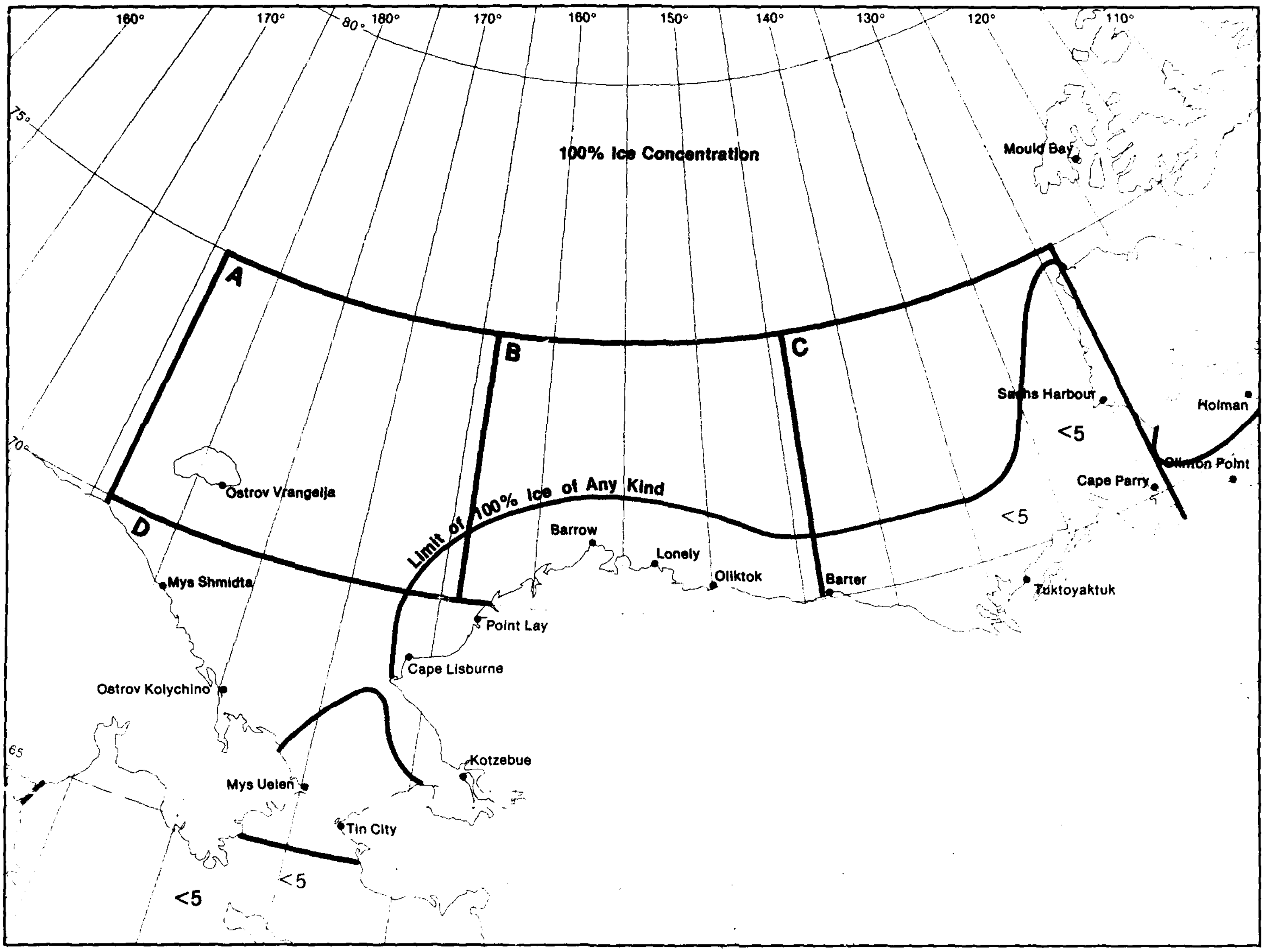
Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11						88
1-1.5				1			
2-2.5							
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≥10							

98

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

April



Marine Area A

No Data Available

Marine Area B

No Data Available

Marine Area C

No Data Available

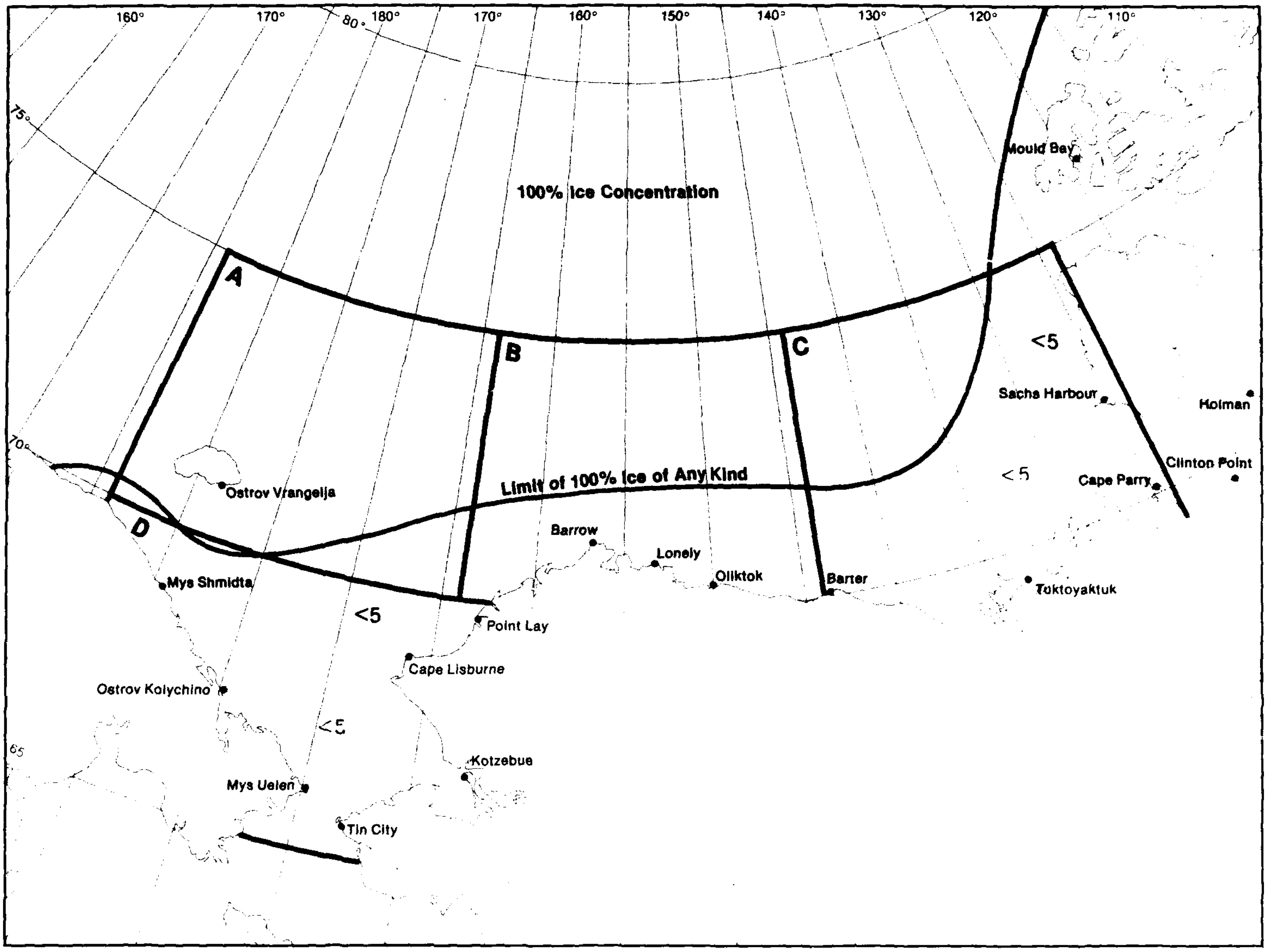
Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13						70
1-1.5	14	2					
2-2.5							
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≥10							

122

May

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet



Marine Area A

No Data Available

Marine Area B

No Data Available

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	26						4
1-1.5	53	1					1
2-2.5	14	1					
3-3.5							
4-5.5	1						
6-7.5	1						
8-9.5							
≥10							

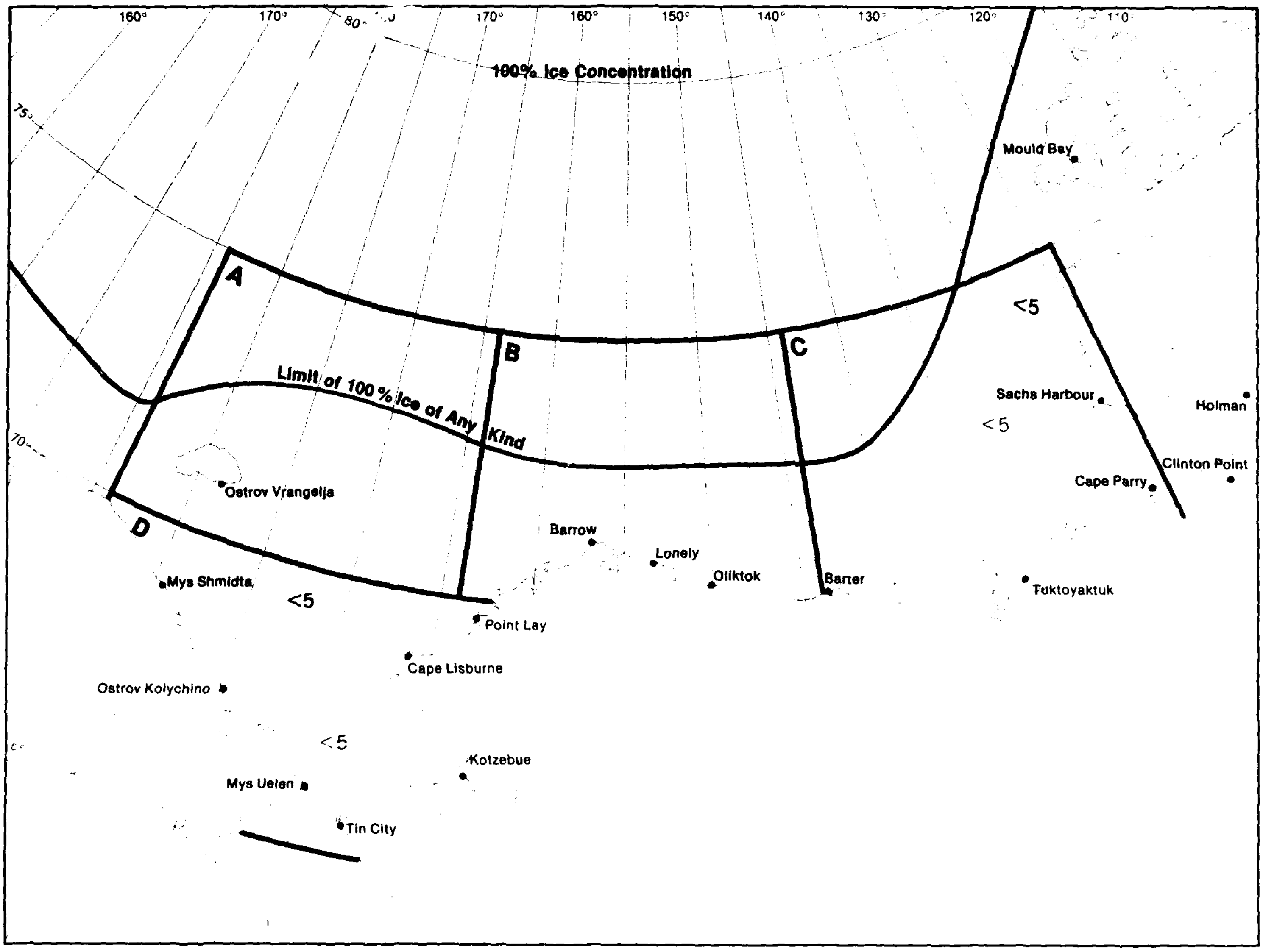
124

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	27	1		1			55
1-1.5	11	1		1			2
2-2.5	1	+					+
3-3.5			+				
4-5.5							
6-7.5							
8-9.5							
≥10							

407

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet



Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	23	+		1			55
1-1.5	13	2	1				3
2-2.5	+	1					+
3-3.5							
4-5.5							+
6-7.5							
8-9.5							
≥10							

200

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	2	+	+			66
1-1.5	5	3	+	1			+
2-2.5	1	+	+	+			+
3-3.5	+	+		+			+
4-5.5				+			+
6-7.5							
8-9.5							
≥10							

1115

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	31	1	+				37
1-1.5	21	2		+			+
2-2.5	3	2	+		+		+
3-3.5	1	1		+			
4-5.5	+	+		+			+
6-7.5							+
8-9.5							
≥10							

1638

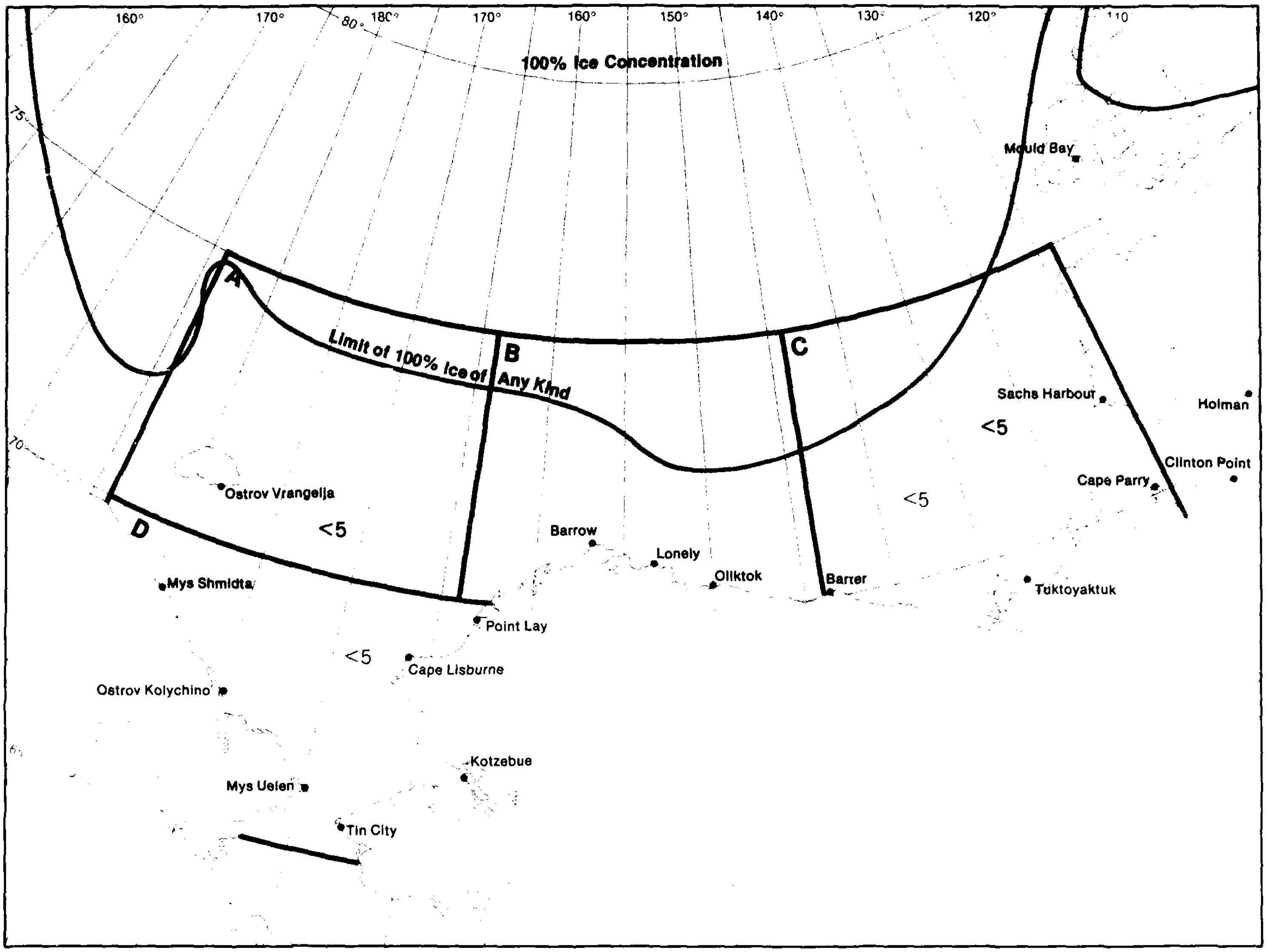
Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	30	2	+	+			25
1-1.5	22	6	1	+	+	+	4
2-2.5	2	2	1	+	+		1
3-3.5	+	1	+	+			+
4-5.5	+	+		+		+	+
6-7.5						+	
8-9.5				+			
≥10							

2104

July

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet



Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	29	1	2				42
1-1.5	13	4	1				4
2-2.5		1	+				1
3-3.5		1					+
4-5.5				+			+
6-7.5							1
8-9.5							
≥10							

363

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	27	1	1	+			54
1-1.5	10	3	+	+	+	+	+
2-2.5	1	1	+				
3-3.5	+	+	+				+
4-5.5	+			+		+	
6-7.5							
8-9.5							
≥10							

2490

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	27	1	+				34
1-1.5	26	2	+	+	+	+	1
2-2.5	4	2	+			+	+
3-3.5	+	+	+	+			+
4-5.5	+	+		+			+
6-7.5	+						
8-9.5							
≥10							

4824

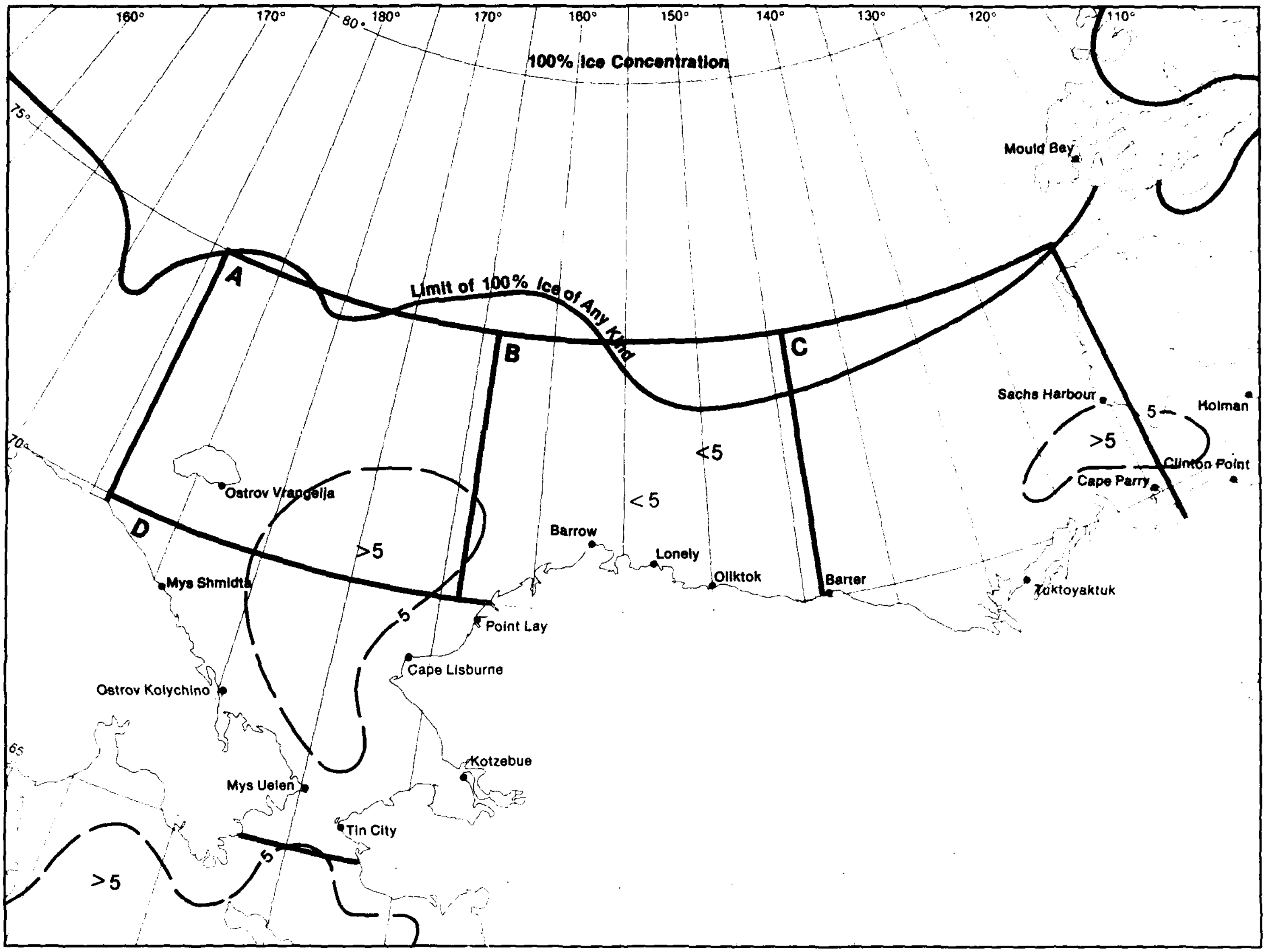
Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	26	2	+	+			17
1-1.5	25	7	2	+	+	+	7
2-2.5	4	3	1	+	+	+	1
3-3.5	1	1	1		+	+	+
4-5.5	+	+		+		+	+
6-7.5		+				+	+
8-9.5							
≥10							

1838

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

August



Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	1	1	1			29
1-1.5	22	4	2		1	+	3
2-2.5	3	7	1	+		+	1
3-3.5	1	2	+				
4-5.5		1	1				
6-7.5		+	+				
8-9.5							
≥10							

516

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	28	1	+	1			38
1-1.5	18	4	1	+	+	1	+
2-2.5	3	2	+		+		
3-3.5	1	+	+			+	
4-5.5	+	+	+			+	
6-7.5							
8-9.5							
≥10							

1591

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	24	1	+				31
1-1.5	25	4	+	+	+		+
2-2.5	6	6	1				+
3-3.5	+	1	+		+	+	+
4-5.5	+	+	+	+			+
6-7.5							
8-9.5							
≥10							

4450

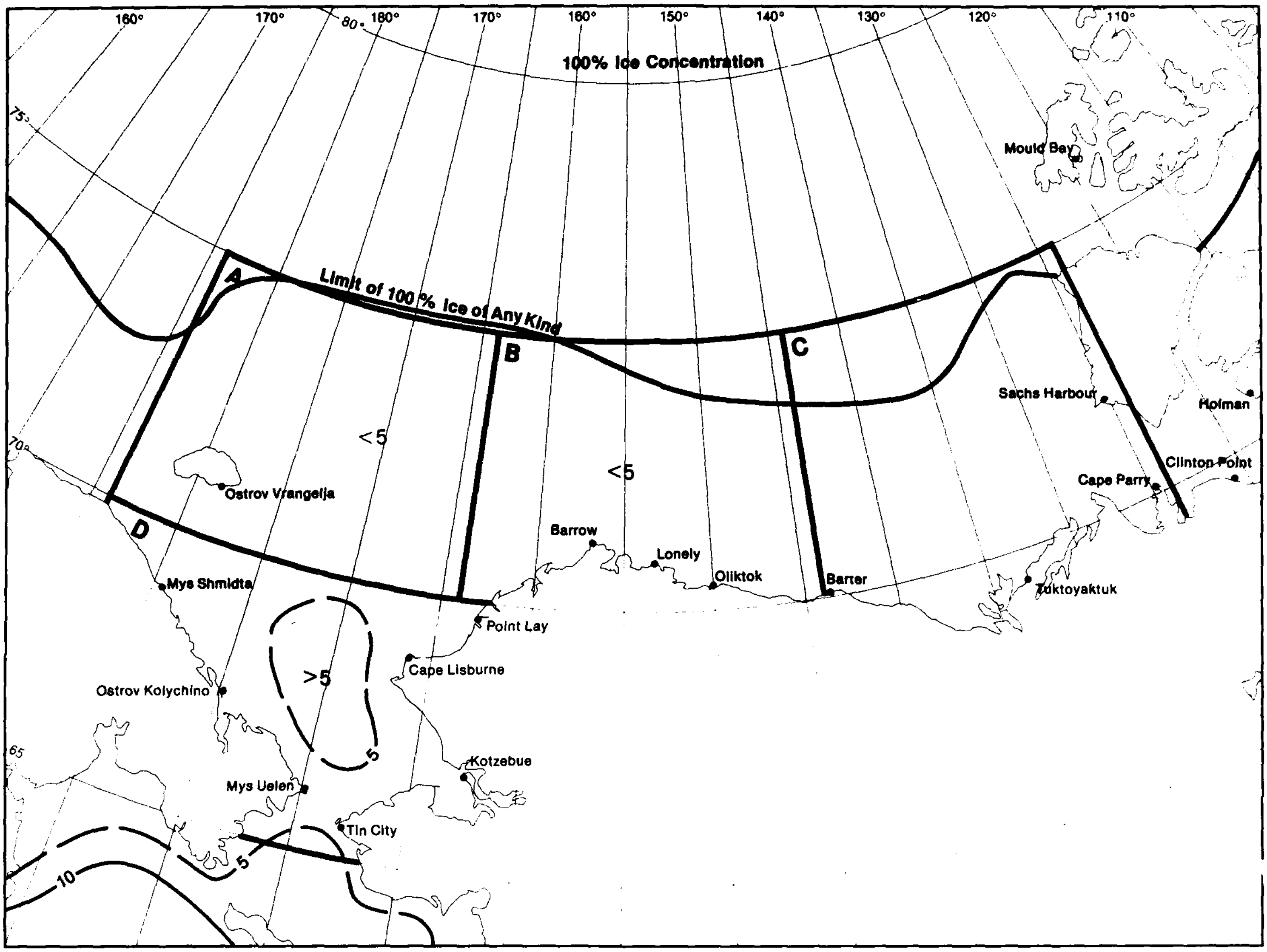
Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	2	+	+			10
1-1.5	28	9	2	+	+	+	4
2-2.5	6	7	2	+	+	+	2
3-3.5	1	3	1	1	+	+	+
4-5.5	+	1	+	+	+		+
6-7.5		+	+	+			
8-9.5		+					
≥10							

1830

September

20 Wave Height and Period
Wave Height ≧ 12 and ≧ 20 Feet



Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1					70
1-1.5	7	3	1				2
2-2.5	4	1	1				3
3-3.5							
4-5.5		1					
6-7.5							
8-9.5							
≥10							

181

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	22	+					58
1-1.5	12	2					+
2-2.5	2	3					
3-3.5							
4-5.5					+		
6-7.5							
8-9.5							
≥10							

236

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	1					54
1-1.5	16	4	+				
2-2.5	5	5	1		+		+
3-3.5	+	2	1	+			
4-5.5		+	+				+
6-7.5							
8-9.5							
≥10							

2025

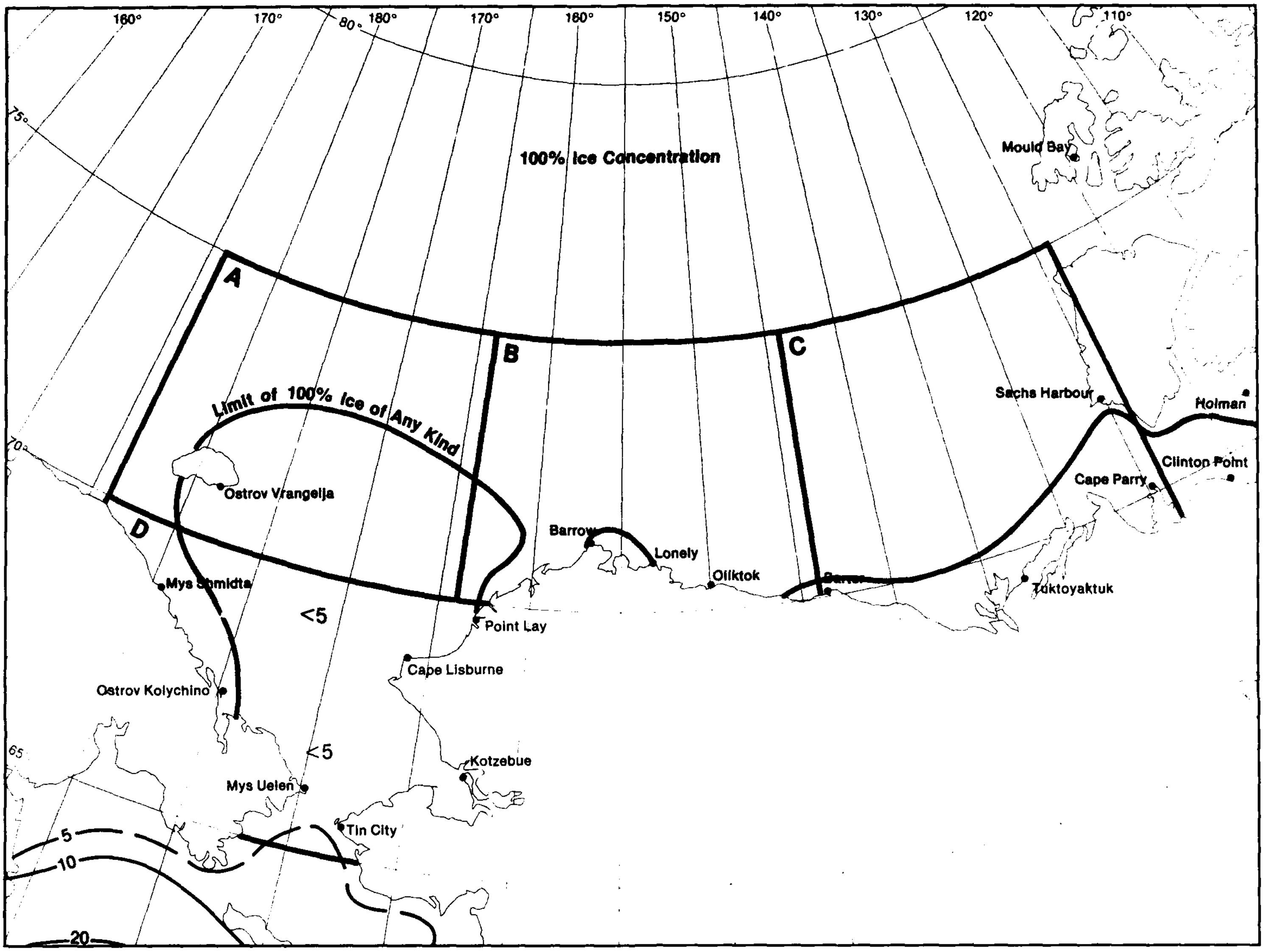
Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	+	+				8
1-1.5	29	4	1	+	+	+	7
2-2.5	13	4	2		1	+	2
3-3.5	2	4	2	+	+	+	1
4-5.5	+	+	1			+	
6-7.5		+		+		+	
8-9.5			+		+		
≥10							

700

20 Wave Height and Period
Wave Height ≥12 and ≥20 Feet

October



Marine Area A

No Data Available

Marine Area B

WAVE HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5							85
1-1.5	8						
2-2.5	8						
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≥10							

13

Marine Area C

WAVE HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5						1	97
1-1.5	+	1					
2-2.5	+						+
3-3.5							
4-5.5							
6-7.5							
8-9.5							
≥10							

307

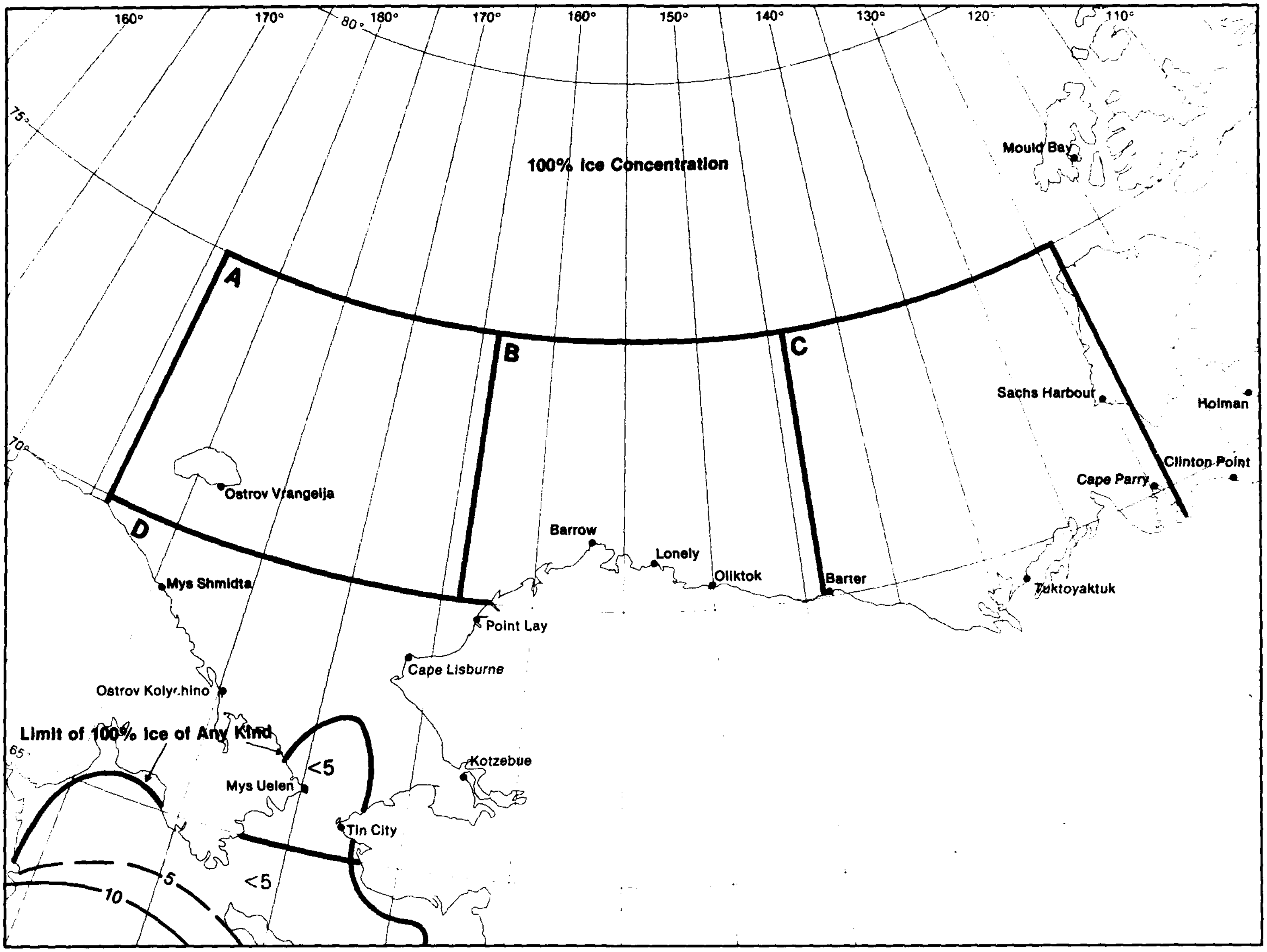
Marine Area D

WAVE HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14						14
1-1.5	24	4					
2-2.5	12	18					2
3-3.5		2	2				
4-5.5			8				
6-7.5							
8-9.5							
≥10							

49

November

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet



Marine Area A	Marine Area B	Marine Area C	Marine Area D
No Data Available	No Data Available	No Data Available	No Data Available

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

December

Map 21. Wave height thresholds

TABLE – Wave height frequencies.

Albers Equal–Area Conic Projection

Graphs: Wave height thresholds

Wave height frequencies.

WAVE HEIGHT (M)	%
0–0.5	10.0
1–1.5	20.0
2–2.5	30.0
3–3.5	20.0
4–5.5	10.0
≧6.0	10.0
N=	1363

Percent frequency of various ranges within the area.

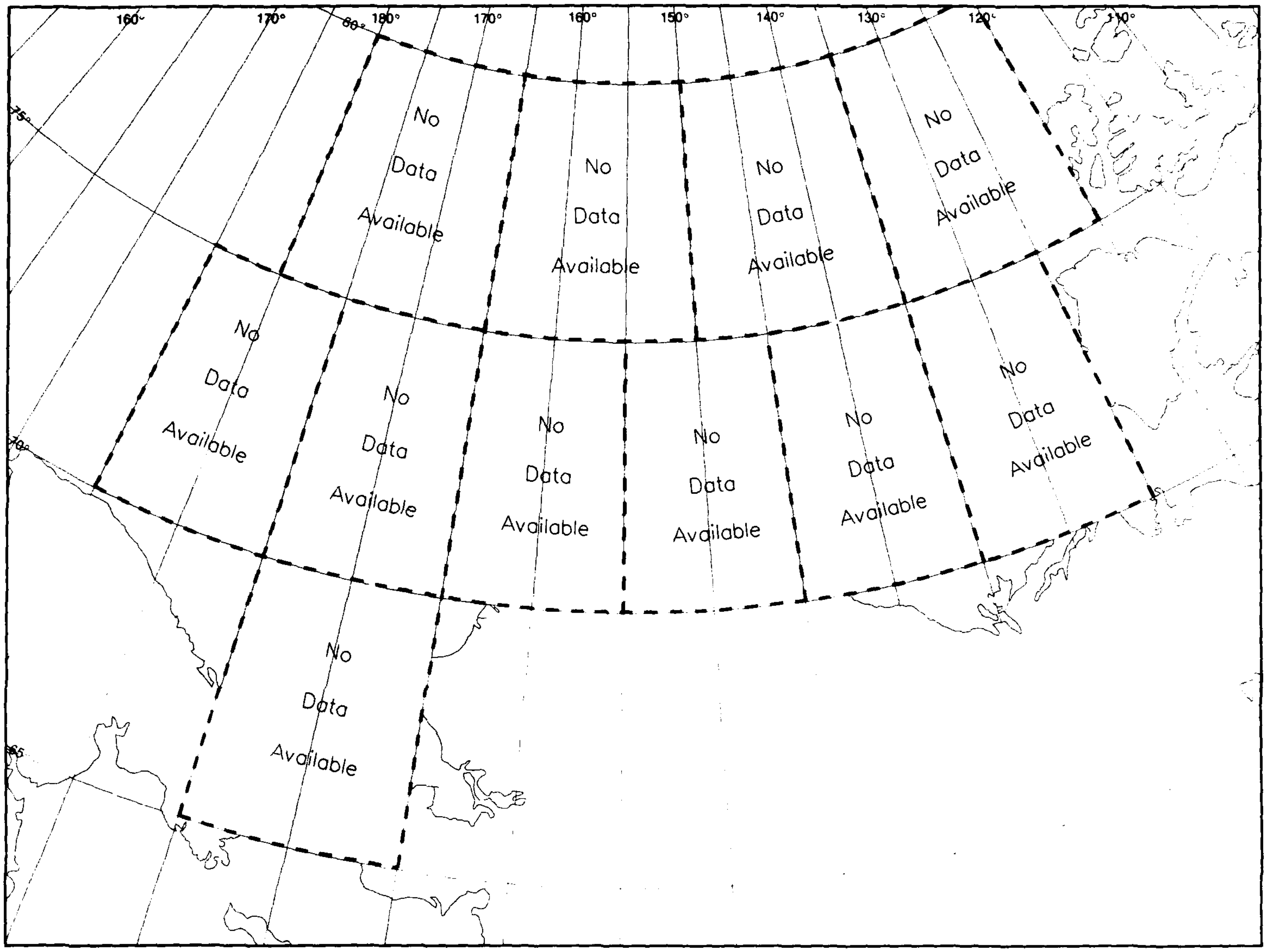
(30.0% of all observed wave heights were in the range 2 to 2.5 meters.)

N = Observation count.

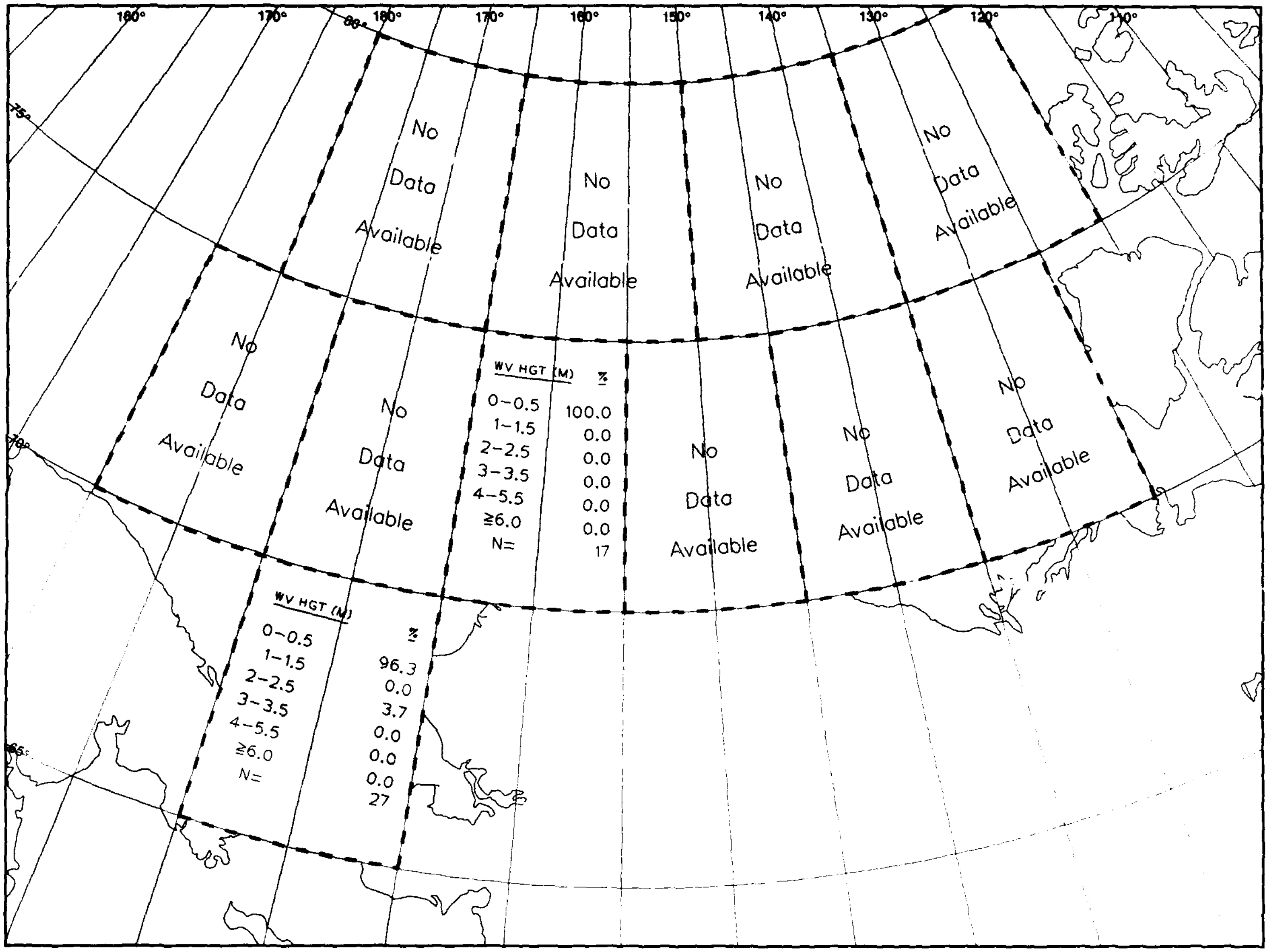
Wave data for these tables were selected from the higher of sea or swell when both were reported.

The wave height should be estimated from the best available point on the ship that permits the height of the waves to be compared to the height of the ship. The point of observation should be chosen amidships where the pitching of the vessel is at a minimum, and the wave height should be estimated when the ship is on an even keel. In general, it has been found by comparing instrument measurements to "eyeball" estimates that small wave heights are underestimated while large wave heights are overestimated. Theoretically, the wave height cannot exceed 1/13 of the wave length, measured from trough to trough. When both sea and swell, or two systems of swell, are present at the same time, the observer first estimates the higher system of waves and then repeats the process for the lower system.

Swell direction may be determined by "eyeball" or by sighting from a compass along wave crests and adding or subtracting 90°. Ship's true heading can also be used to determine the direction from which swells are approaching. The higher the observation point, the easier it is to determine swell direction. The average of several observations, rounded to the nearest 10°, should be used as the observed swell direction. Refer to the texts for Sets 14 and 18-21 for complete information on waves.



Marine Area A	Marine Area B	Marine Area C	Marine Area D
No Data Available	No Data Available	No Data Available	No Data Available



Marine Area A

No Data Available

Marine Area B

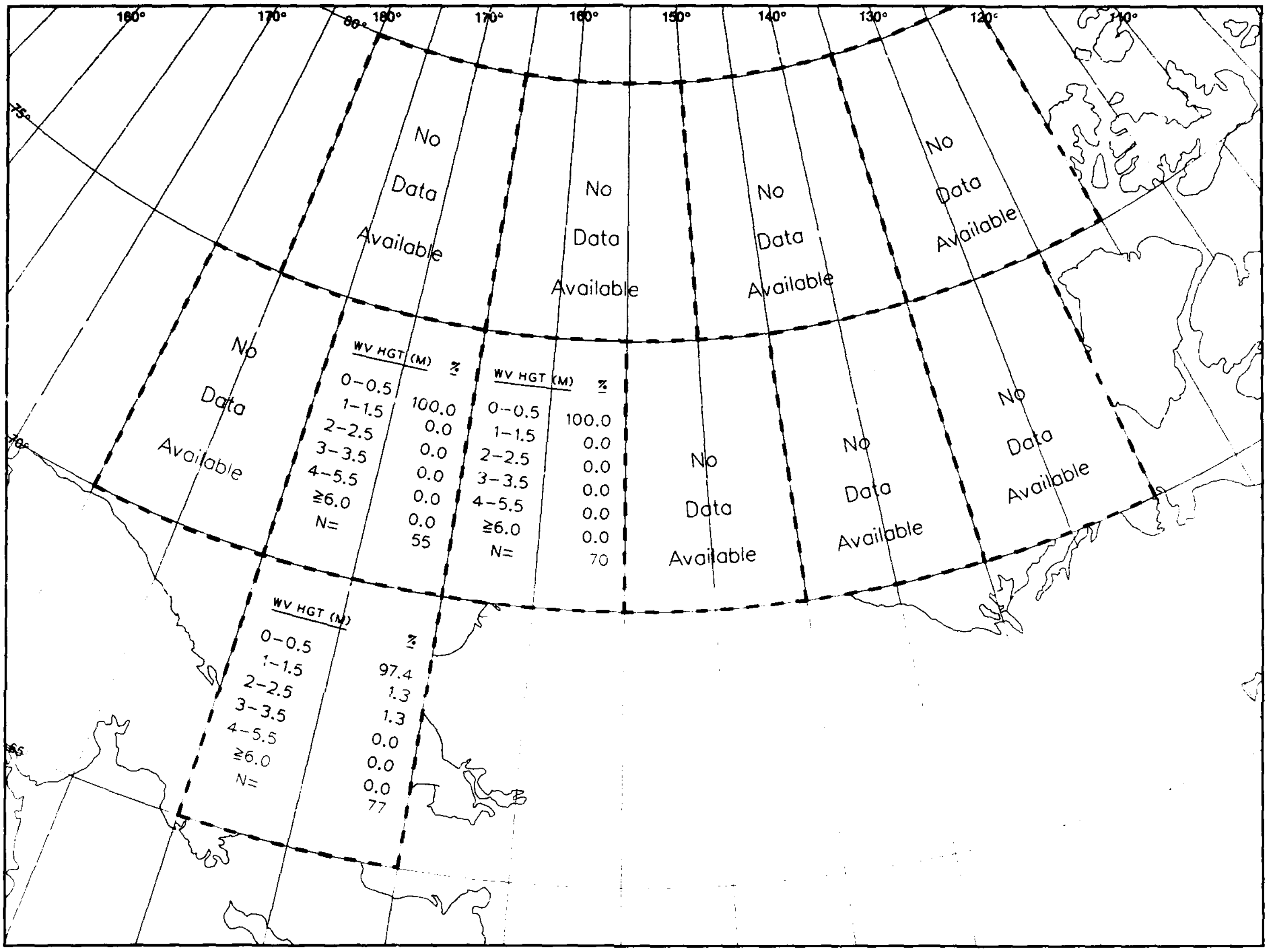
WAVE HEIGHT (M)	%
0-0.5	100.0
1-1.5	0.0
2-2.5	0.0
3-3.5	0.0
4-5.5	0.0
≥6.0	0.0
N=	16

Marine Area C

No Data Available

Marine Area D

WAVE HEIGHT (M)	%
0-0.5	93.3
1-1.5	0.0
2-2.5	6.7
3-3.5	0.0
4-5.5	0.0
≥6.0	0.0
N=	30



Marine Area A

WAVE HEIGHT (M)	%
0–0.5	89.6
1–1.5	10.4
2–2.5	0.0
3–3.5	0.0
4–5.5	0.0
≥6.0	0.0
N=	77

Marine Area B

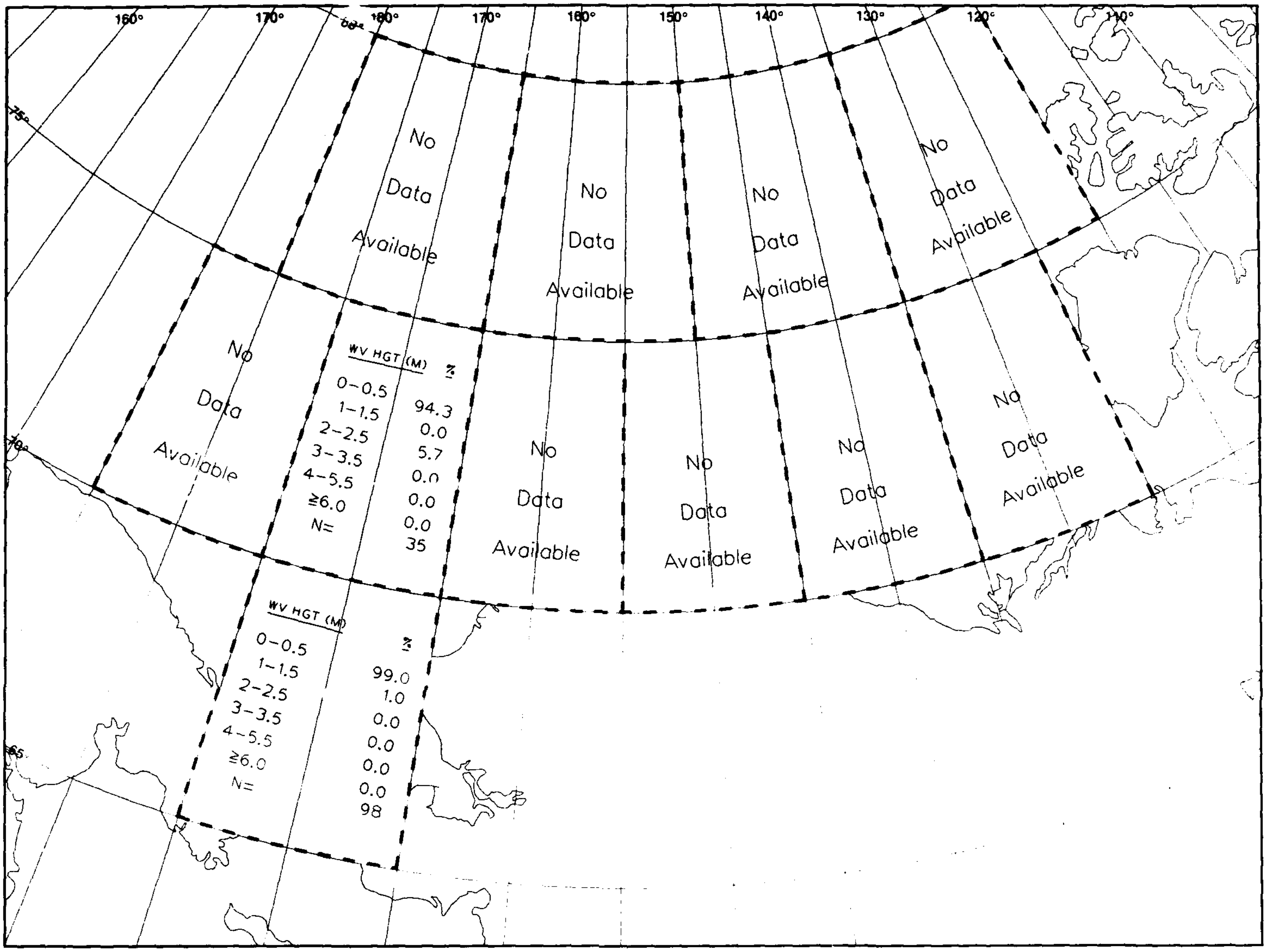
WAVE HEIGHT (M)	%
0–0.5	100.0
1–1.5	0.0
2–2.5	0.0
3–3.5	0.0
4–5.5	0.0
≥6.0	0.0
N=	60

Marine Area C

No Data Available

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	93.8
1–1.5	2.5
2–2.5	2.5
3–3.5	1.3
4–5.5	0.0
≥6.0	0.0
N=	80



Marine Area A

WAVE HEIGHT (M)	%
0-0.5	87.2
1-1.5	0.0
2-2.5	12.8
3-3.5	0.0
4-5.5	0.0
≥6.0	0.0
N=	39

Marine Area B

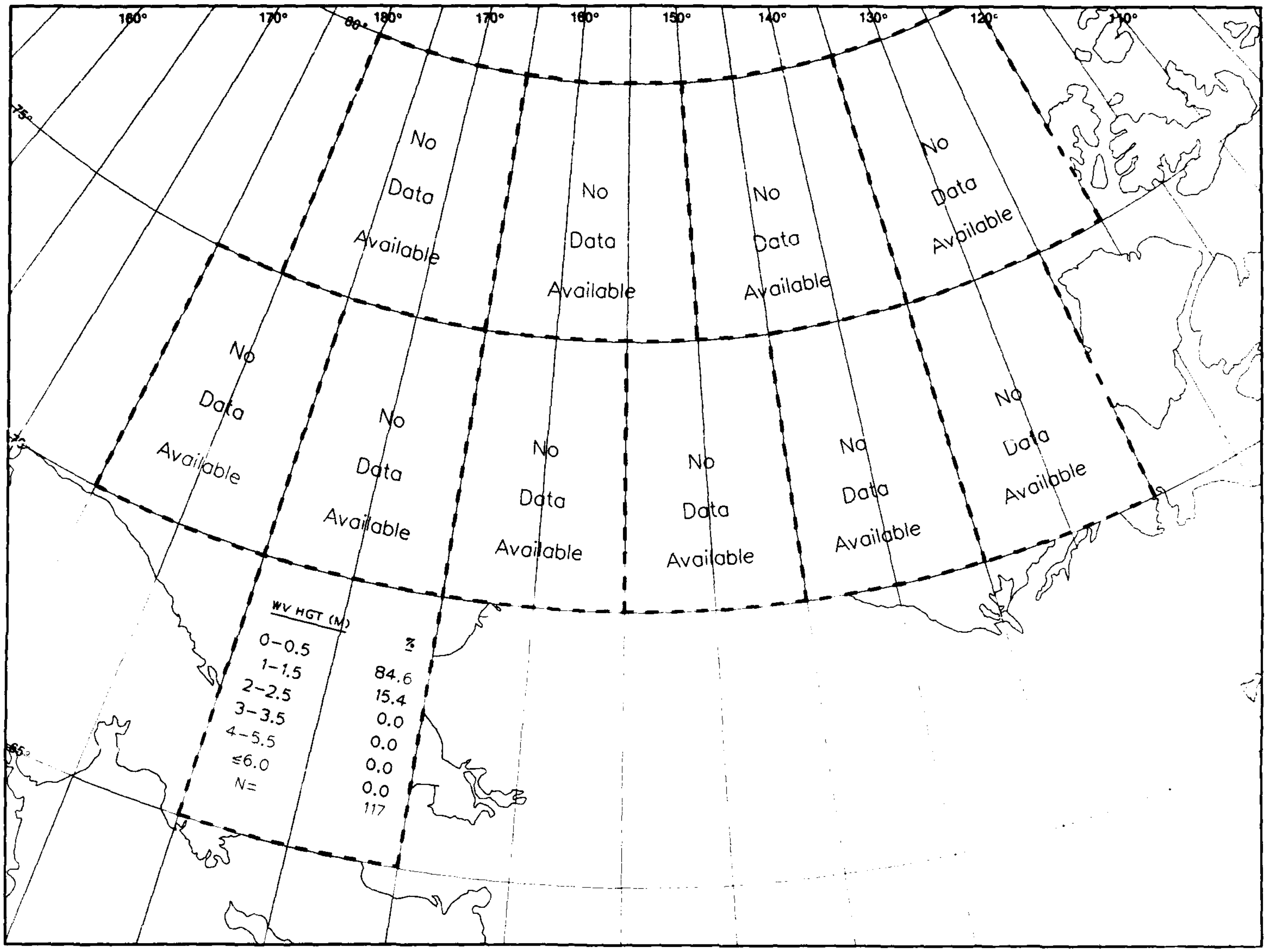
No Data Available

Marine Area C

No Data Available

Marine Area D

WAVE HEIGHT (M)	%
0-0.5	99.0
1-1.5	1.0
2-2.5	0.0
3-3.5	0.0
4-5.5	0.0
≥6.0	0.0
N=	98



Marine Area A

No Data Available

Marine Area B

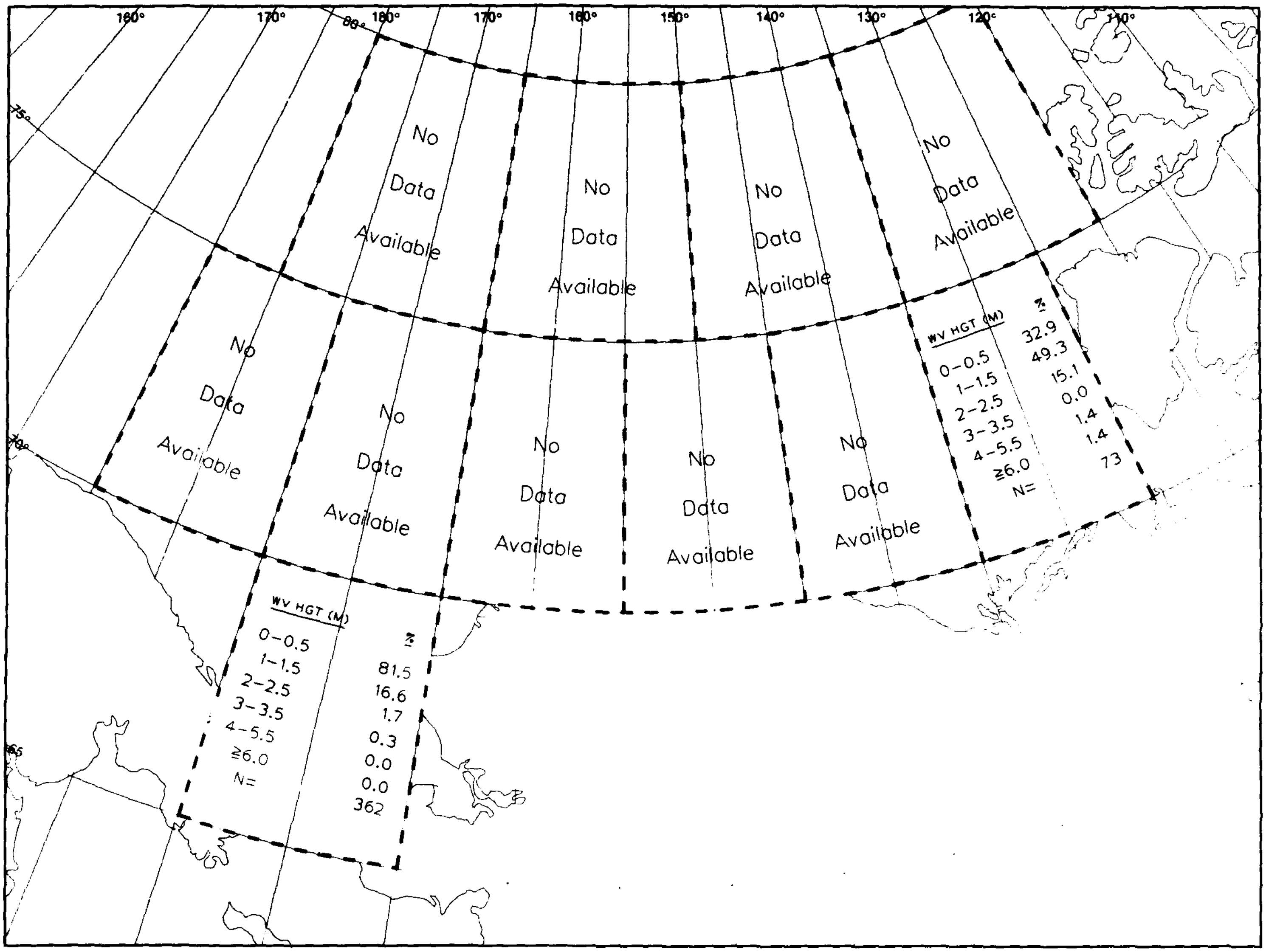
No Data Available

Marine Area C

No Data Available

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	83.6
1–1.5	16.4
2–2.5	0.0
3–3.5	0.0
4–5.5	0.0
≧6.0	0.0
N=	122



Marine Area A

No Data Available

Marine Area B

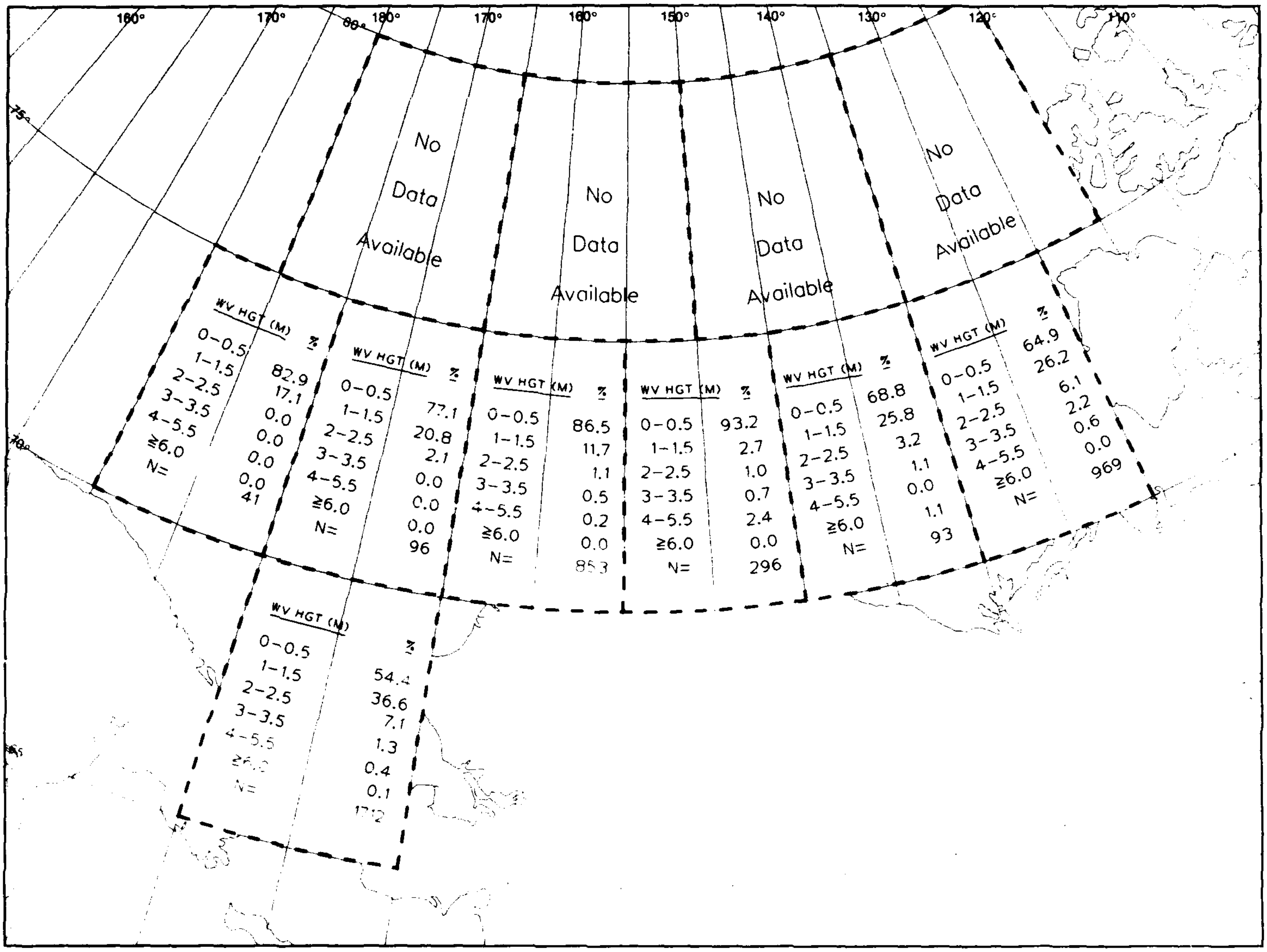
No Data Available

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	29.8
1–1.5	54.0
2–2.5	14.5
3–3.5	0.0
4–5.5	0.8
≥6.0	0.8
N=	124

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	83.0
1–1.5	15.0
2–2.5	1.7
3–3.5	0.2
4–5.5	0.0
≥6.0	0.0
N=	407



Marine Area A

WAVE HEIGHT (M)	%
0–0.5	79.5
1–1.5	19.0
2–2.5	1.5
3–3.5	0.0
4–5.5	0.0
≥6.0	0.0
N=	200

Marine Area B

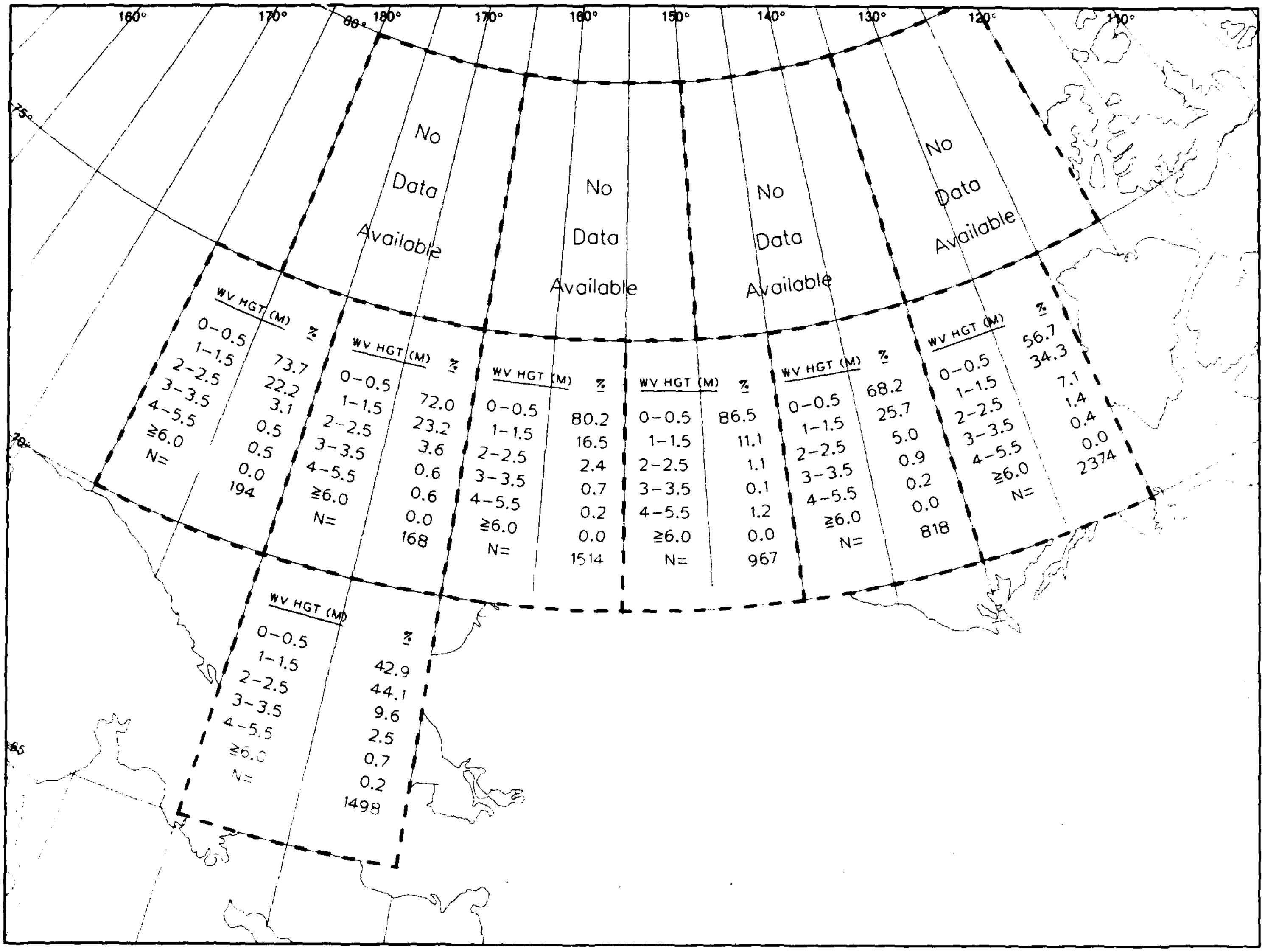
WAVE HEIGHT (M)	%
0–0.5	88.4
1–1.5	9.2
2–2.5	1.0
3–3.5	0.5
4–5.5	0.8
≥6.0	0.0
N=	1115

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	68.5
1–1.5	23.7
2–2.5	5.6
3–3.5	1.7
4–5.5	0.4
≥6.0	0.1
N=	1638

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	58.9
1–1.5	33.1
2–2.5	6.3
3–3.5	1.2
4–5.5	0.3
≥6.0	0.1
N=	2104



Marine Area A

WAVE HEIGHT (M)	%
0–0.5	74.4
1–1.5	21.8
2–2.5	2.5
3–3.5	0.8
4–5.5	0.6
≧6.0	0.0
N=	363

Marine Area B

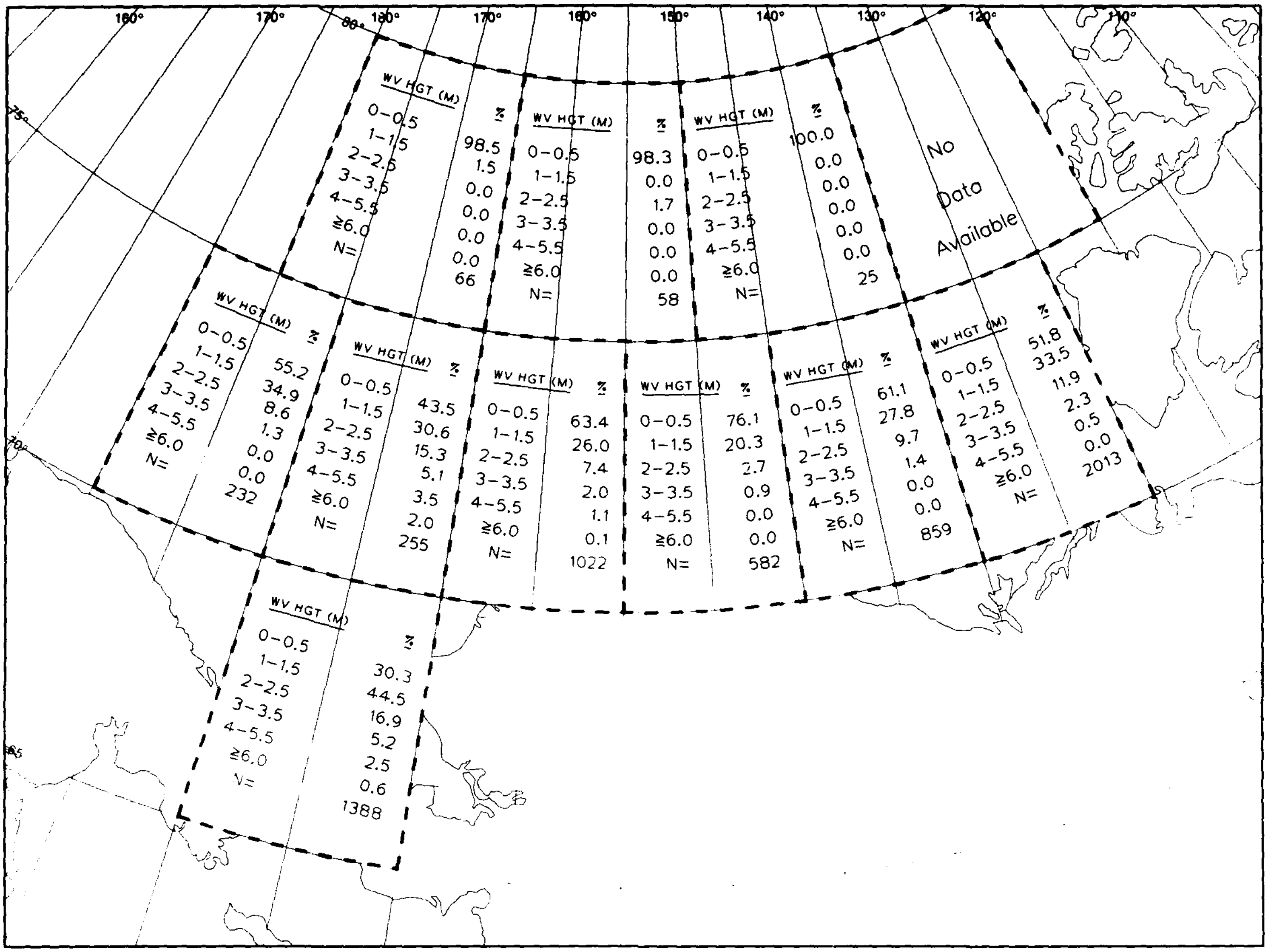
WAVE HEIGHT (M)	%
0–0.5	82.9
1–1.5	14.1
2–2.5	1.9
3–3.5	0.4
4–5.5	0.6
≧6.0	0.0
N=	2490

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	63.1
1–1.5	29.2
2–2.5	6.4
3–3.5	1.0
4–5.5	0.4
≧6.0	0.0
N=	4824

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	45.4
1–1.5	41.8
2–2.5	9.6
3–3.5	2.3
4–5.5	0.8
≧6.0	0.2
N=	1838



Marine Area A

WAVE HEIGHT (M)	%
0-0.5	50.8
1-1.5	30.6
2-2.5	12.2
3-3.5	3.3
4-5.5	1.9
≥6.0	1.2
N=	516

Marine Area B

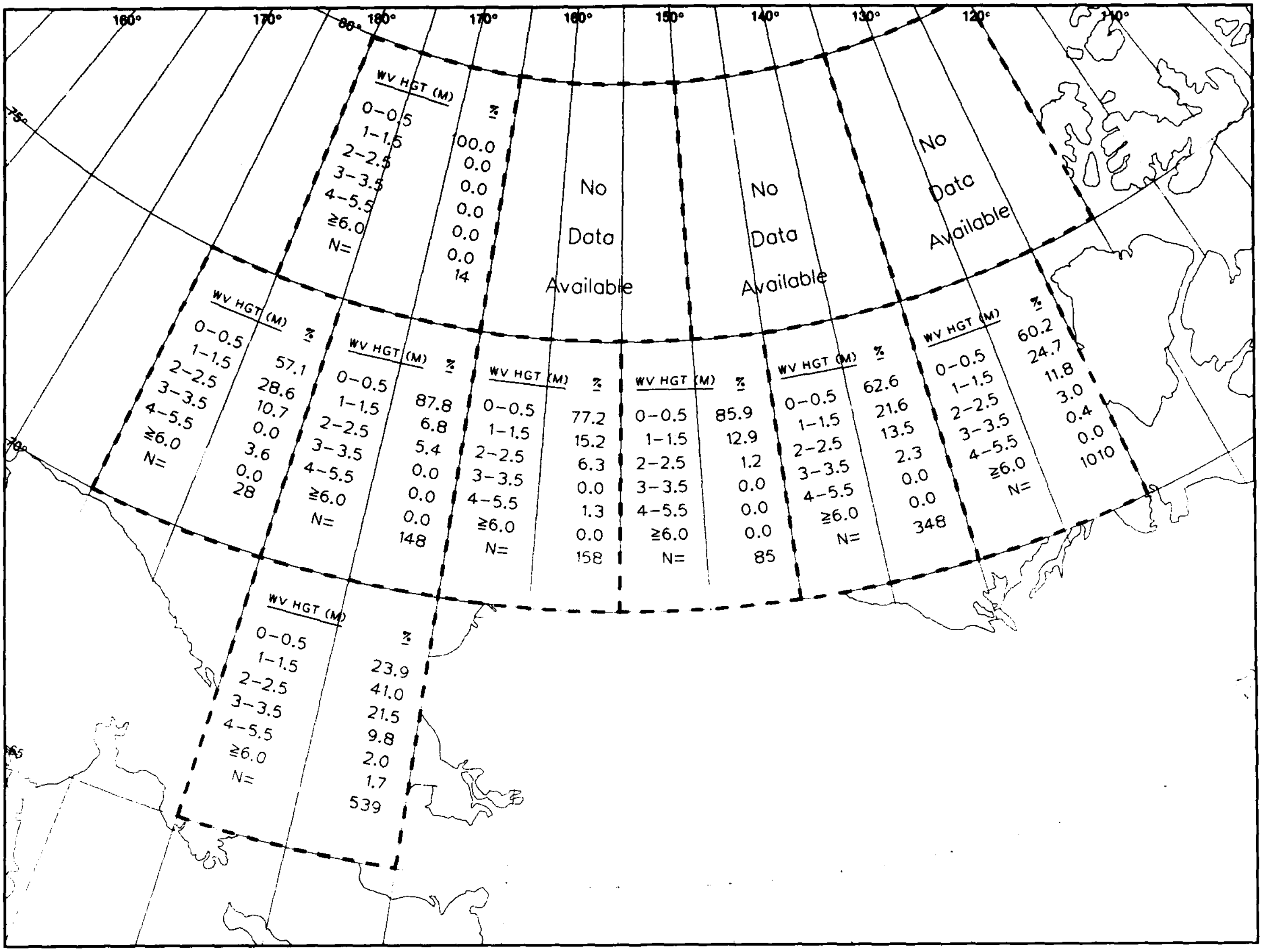
WAVE HEIGHT (M)	%
0-0.5	68.4
1-1.5	23.8
2-2.5	5.6
3-3.5	1.6
4-5.5	0.6
≥6.0	0.0
N=	1591

Marine Area C

WAVE HEIGHT (M)	%
0-0.5	55.5
1-1.5	30.2
2-2.5	12.1
3-3.5	1.8
4-5.5	0.4
≥6.0	0.0
N=	4450

Marine Area D

WAVE HEIGHT (M)	%
0-0.5	30.4
1-1.5	42.4
2-2.5	18.1
3-3.5	6.2
4-5.5	2.5
≥6.0	0.4
N=	1830



Marine Area A

WAVE HEIGHT (M)	%
0–0.5	77.3
1–1.5	12.2
2–2.5	9.4
3–3.5	0.0
4–5.5	1.1
≥6.0	0.0
N=	181

Marine Area B

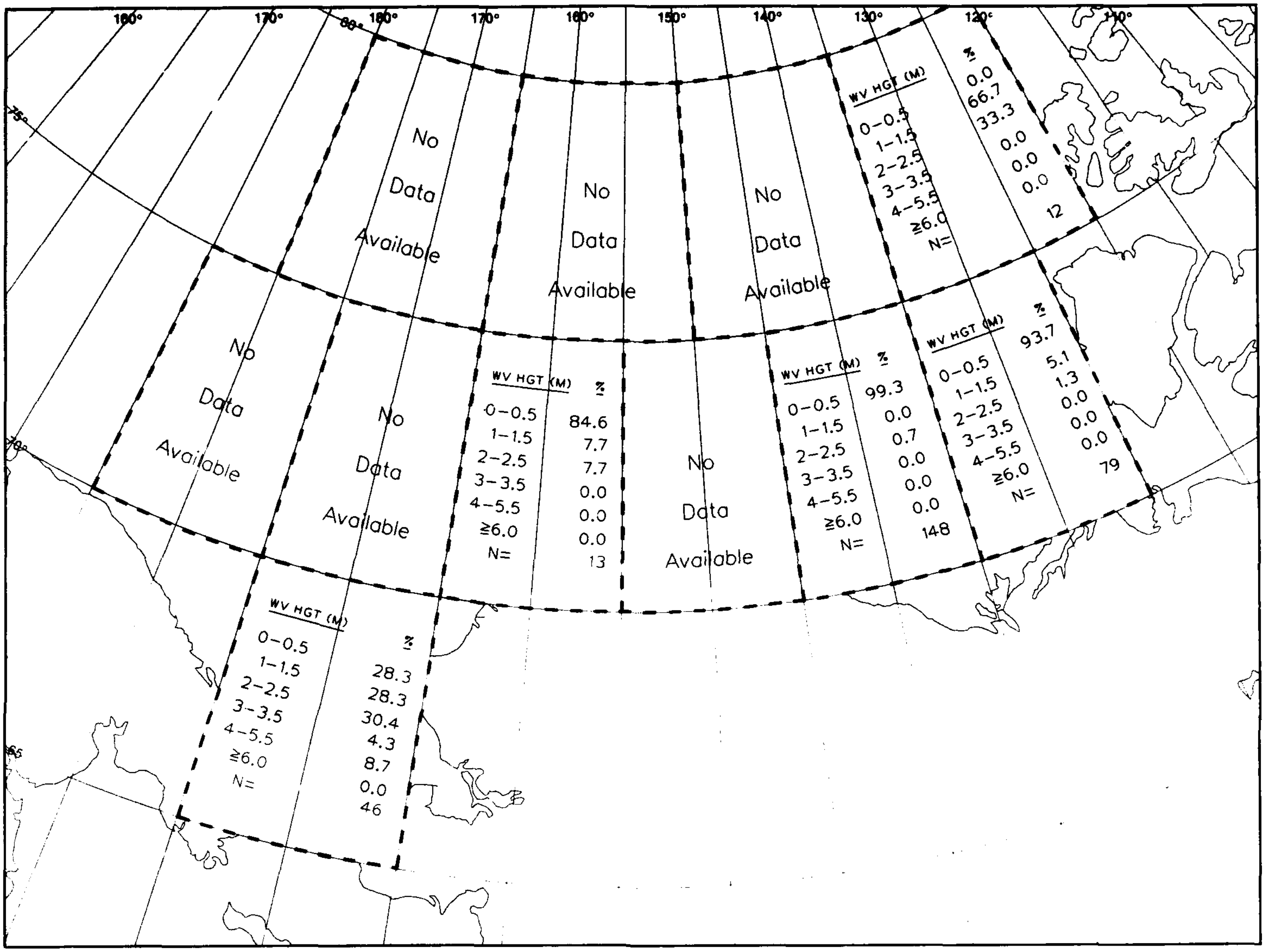
WAVE HEIGHT (M)	%
0–0.5	80.5
1–1.5	14.4
2–2.5	4.7
3–3.5	0.0
4–5.5	0.4
≥6.0	0.0
N=	236

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	66.1
1–1.5	19.5
2–2.5	11.0
3–3.5	3.2
4–5.5	0.3
≥6.0	0.0
N=	2025

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	24.7
1–1.5	41.0
2–2.5	22.0
3–3.5	9.0
4–5.5	2.0
≥6.0	1.3
N=	700



Marine Area A

No Data Available

Marine Area B

WAVE HEIGHT (M)	%
0-0.5	84.6
1-1.5	7.7
2-2.5	7.7
3-3.5	0.0
4-5.5	0.0
≥6.0	0.0
N=	13

Marine Area C

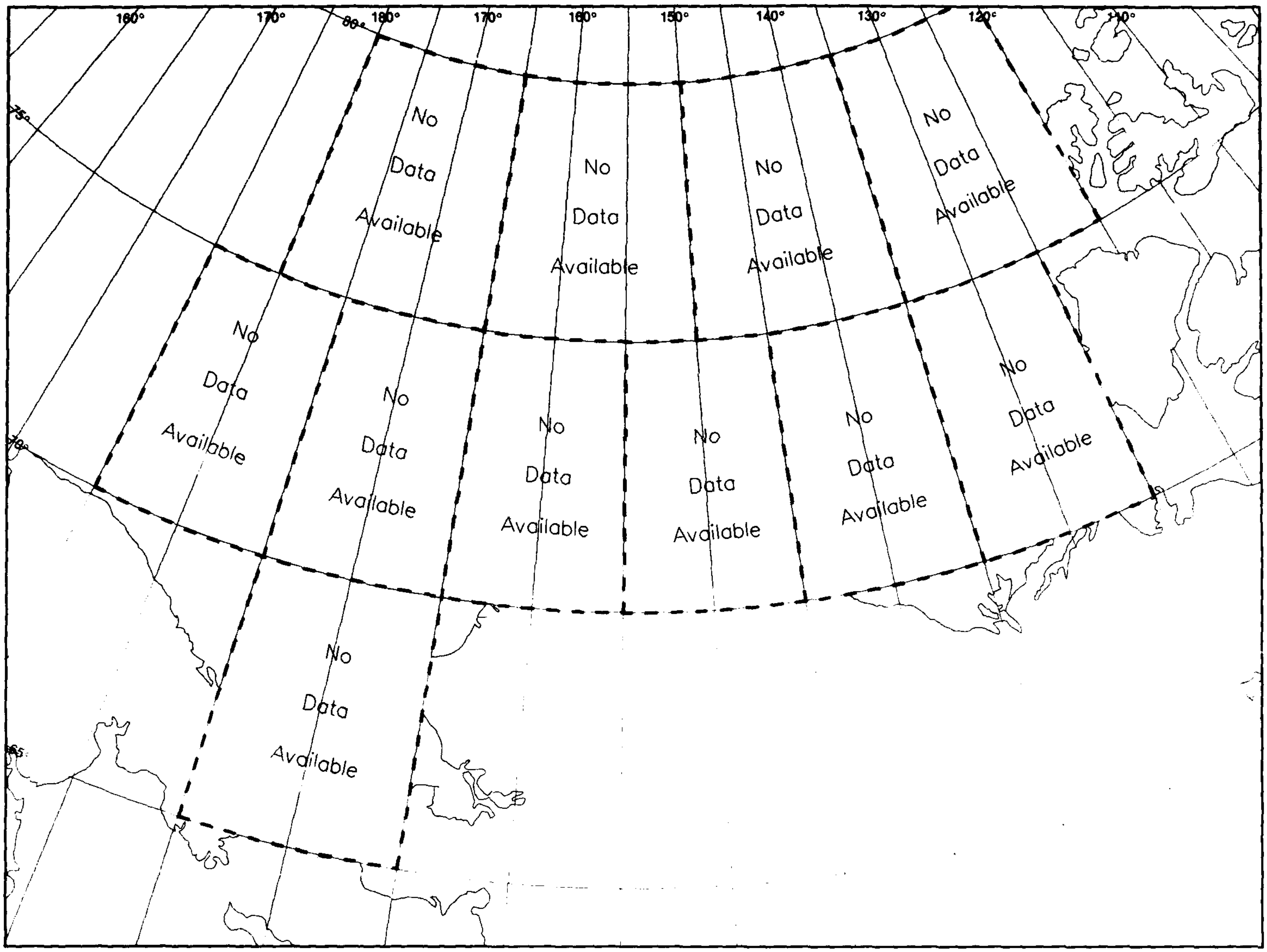
WAVE HEIGHT (M)	%
0-0.5	98.0
1-1.5	1.3
2-2.5	0.7
3-3.5	0.0
4-5.5	0.0
≥6.0	0.0
N=	307

Marine Area D

WAVE HEIGHT (M)	%
0-0.5	28.6
1-1.5	28.6
2-2.5	30.6
3-3.5	4.1
4-5.5	8.2
≥6.0	0.0
N=	49

November

21 Wave Height Thresholds



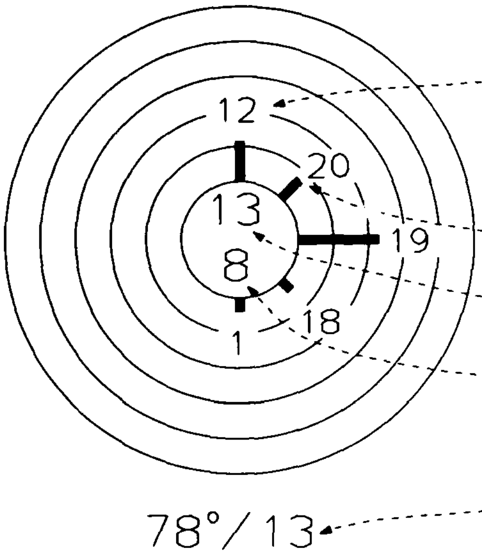
Marine Area A	Marine Area B	Marine Area C	Marine Area D
No Data Available	No Data Available	No Data Available	No Data Available

Map 22. Low pressure center movement

ROSE – Percent frequency of low pressure center movement.

BLACK ARROWS – Preferred storm tracks (solid for primary tracks, dashed for secondary tracks).

Exact Cylindrical Equidistant Projection



Six hour movements of low pressure centers considering only closed circulations.

Mean speed: Printed figures at the end of each bar represent the mean speed of movement (in knots) toward the indicated direction.

(Low pressure centers moving toward the N had a mean speed of 12 knots.)

Direction frequency: Bars represent percent frequency of six hour movements toward each direction. Each circle represents 20%.

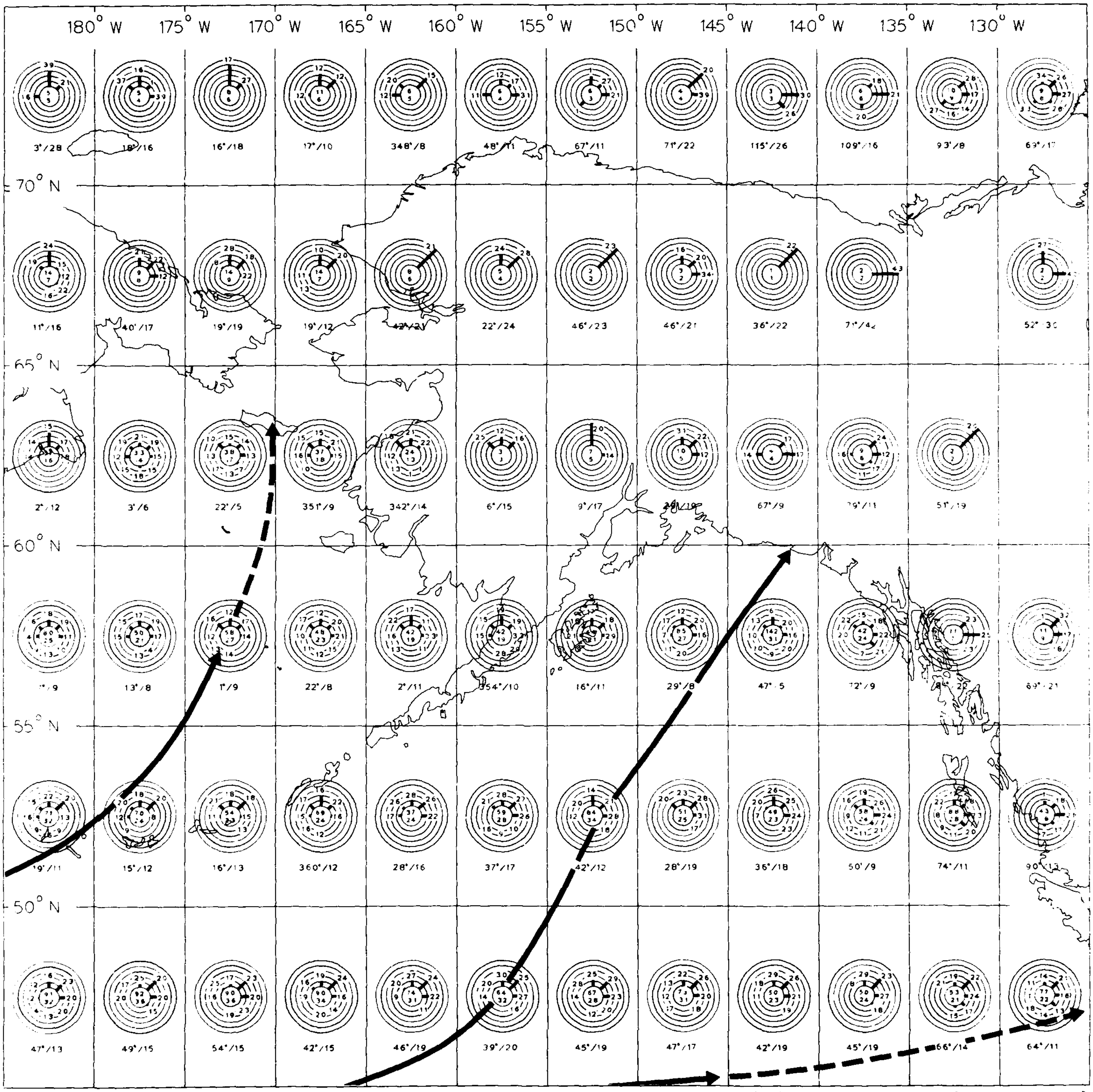
(18% of all six hour movements were toward the NE.)

(Statistics for this rose are based on 13 six hour movements.)

(8 low pressure centers were observed in the 5° X 5° area during the 20 year period of record 1/66-12/85.)

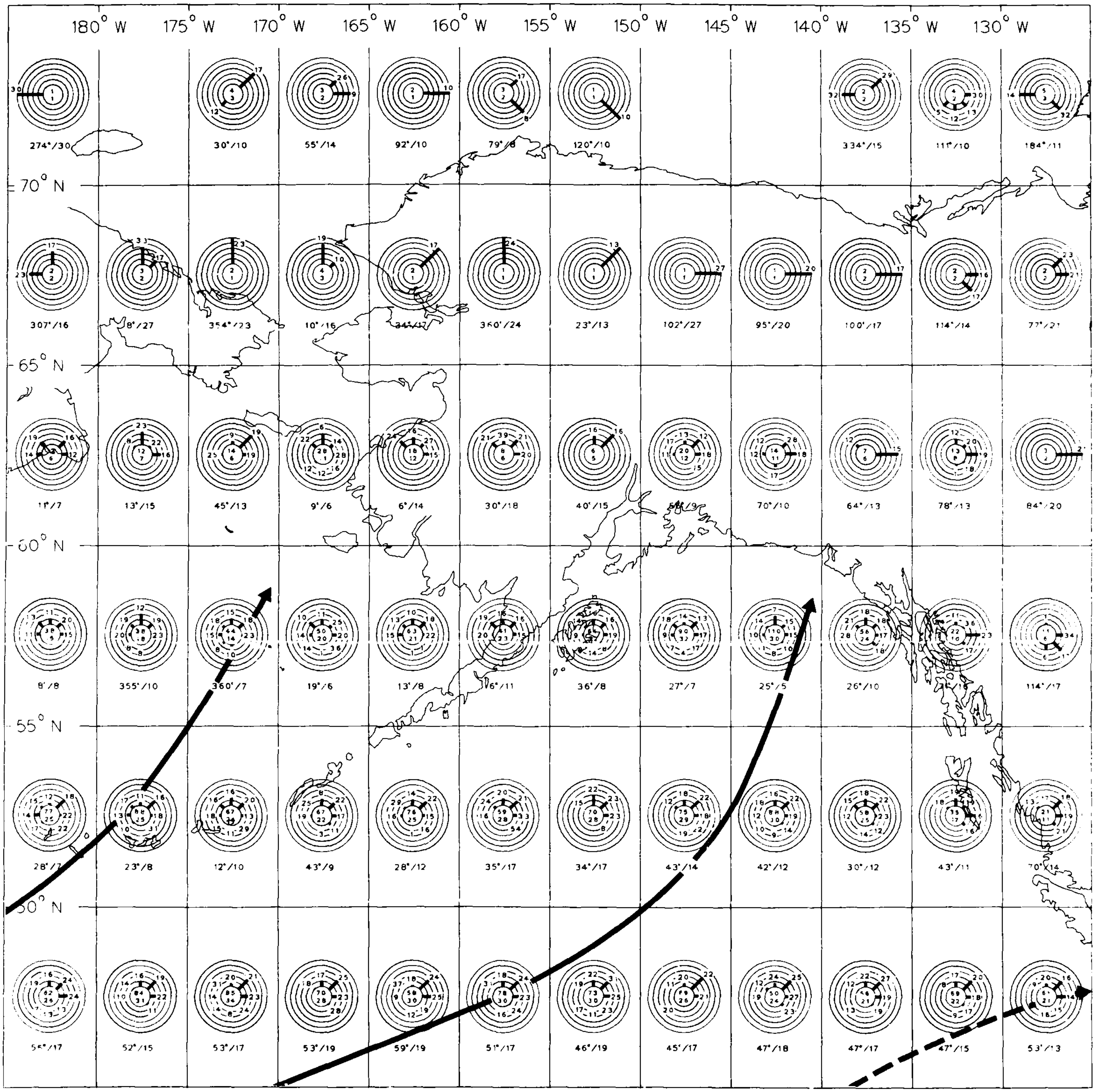
(Mean vector movement of all centers was toward 78° (ENE) at 13 knots.)

Refer to the introductory text for Section II for more information on low pressure center movement and preferred storm tracks.

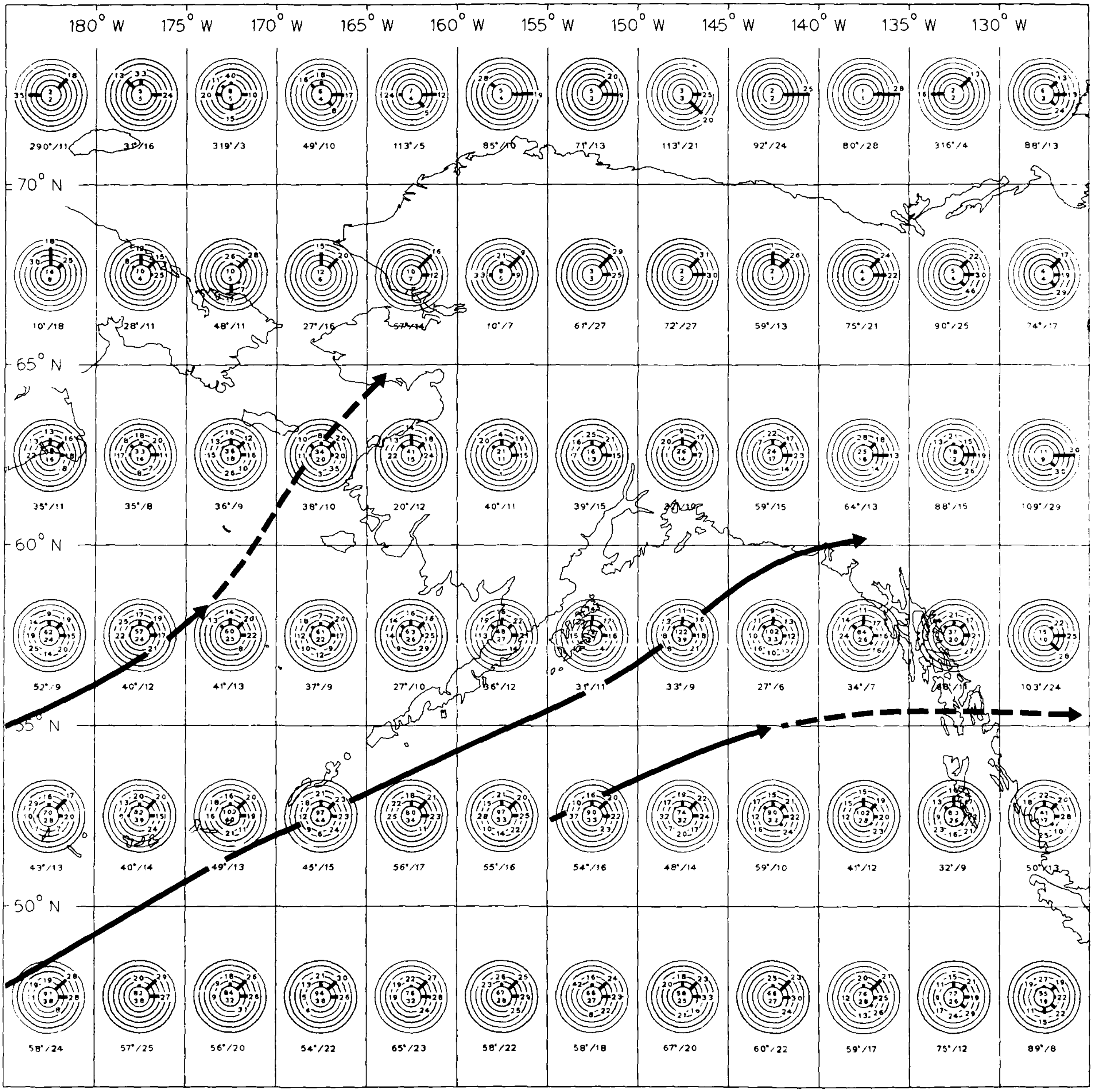


January

22 Low pressure center movement

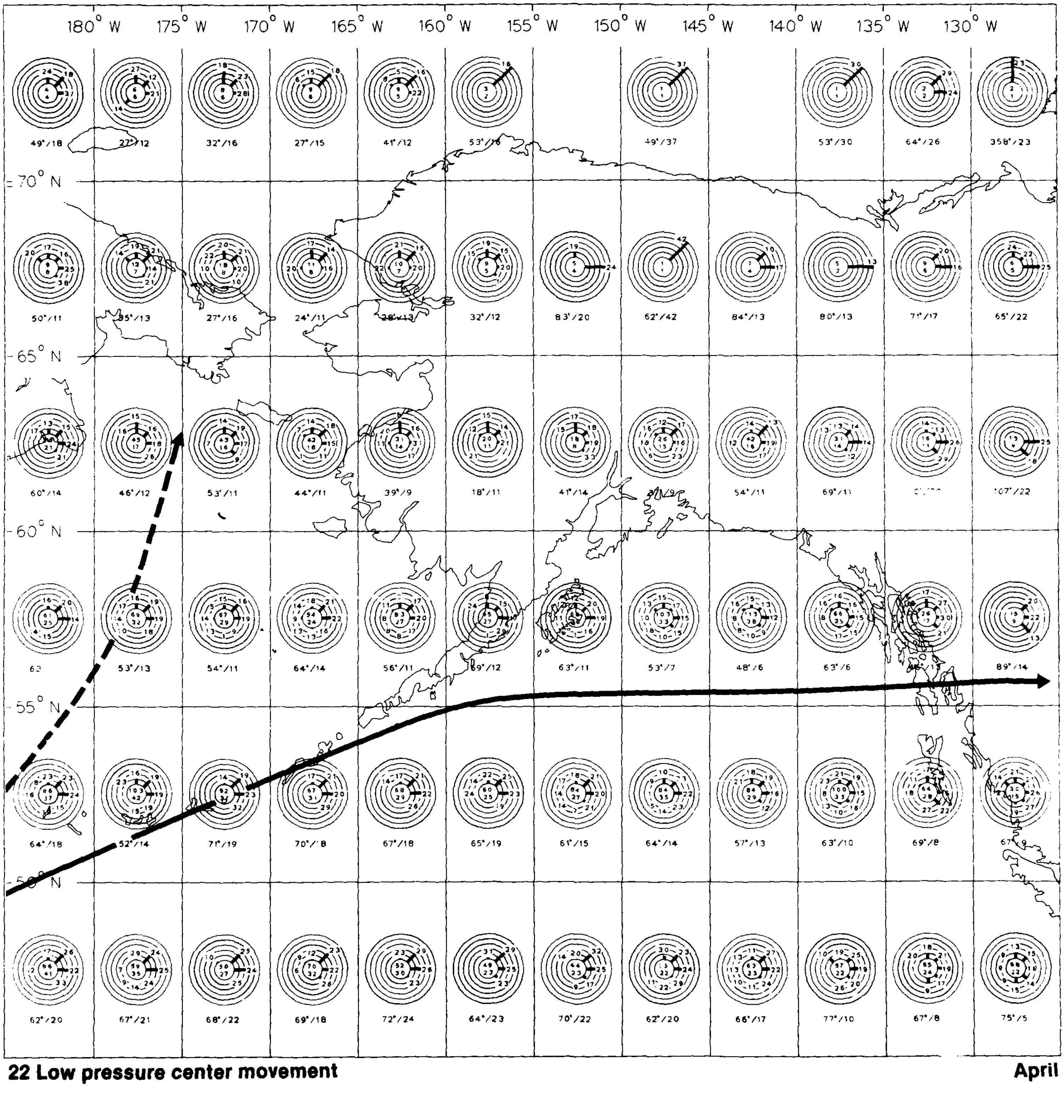


22 Low pressure center movement **February**

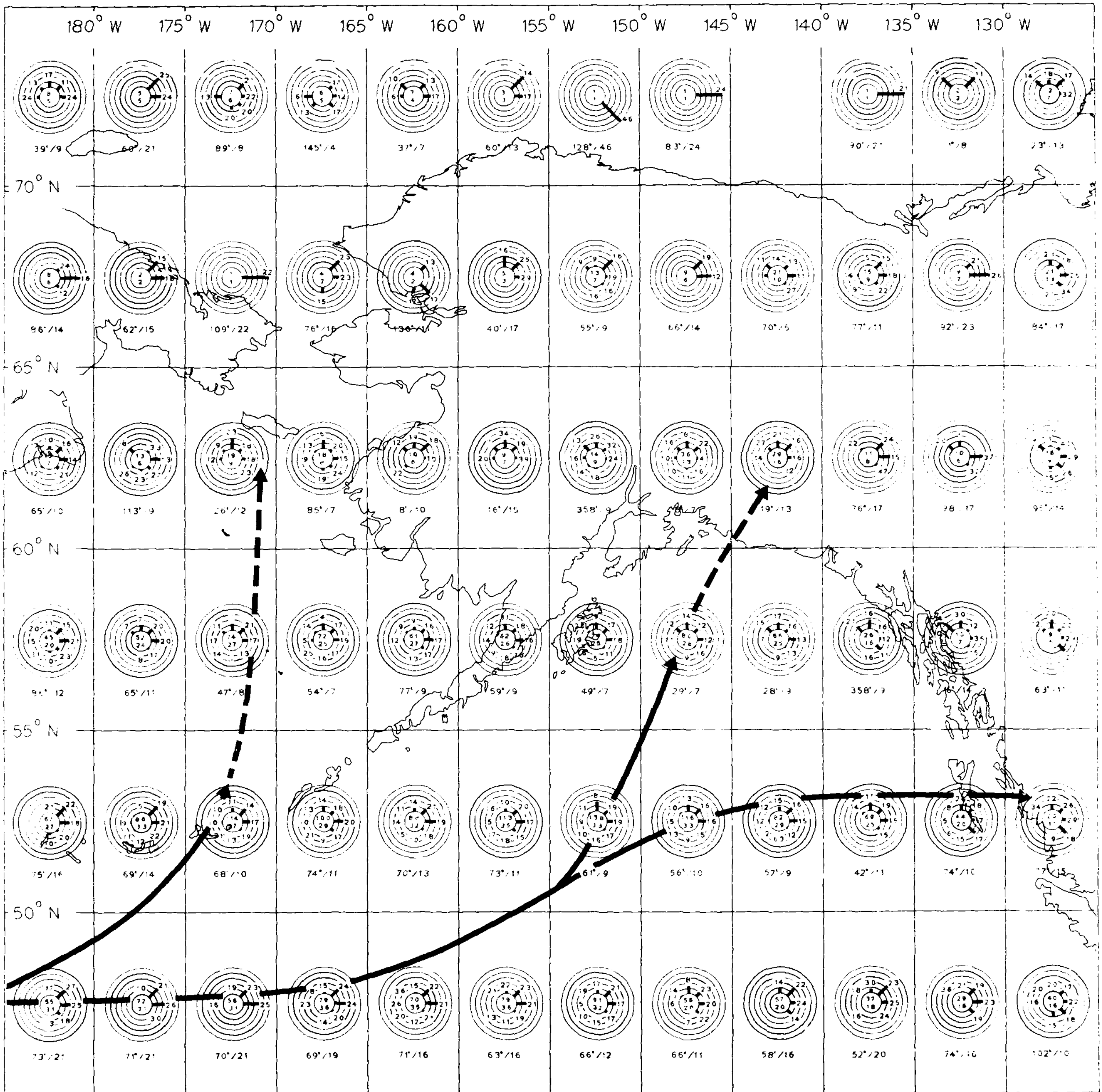


March

22 Low pressure center movement

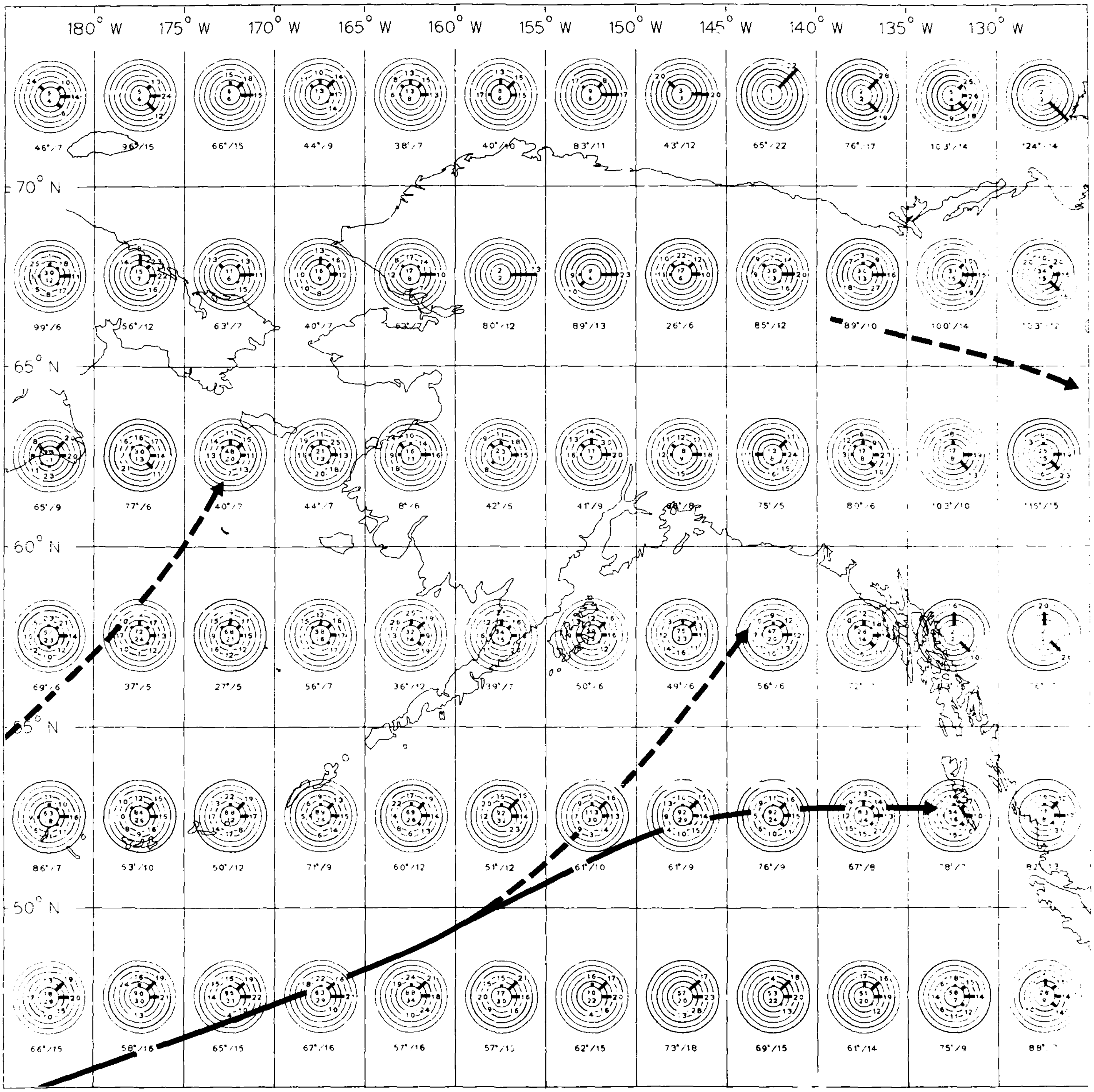


22 Low pressure center movement **April**

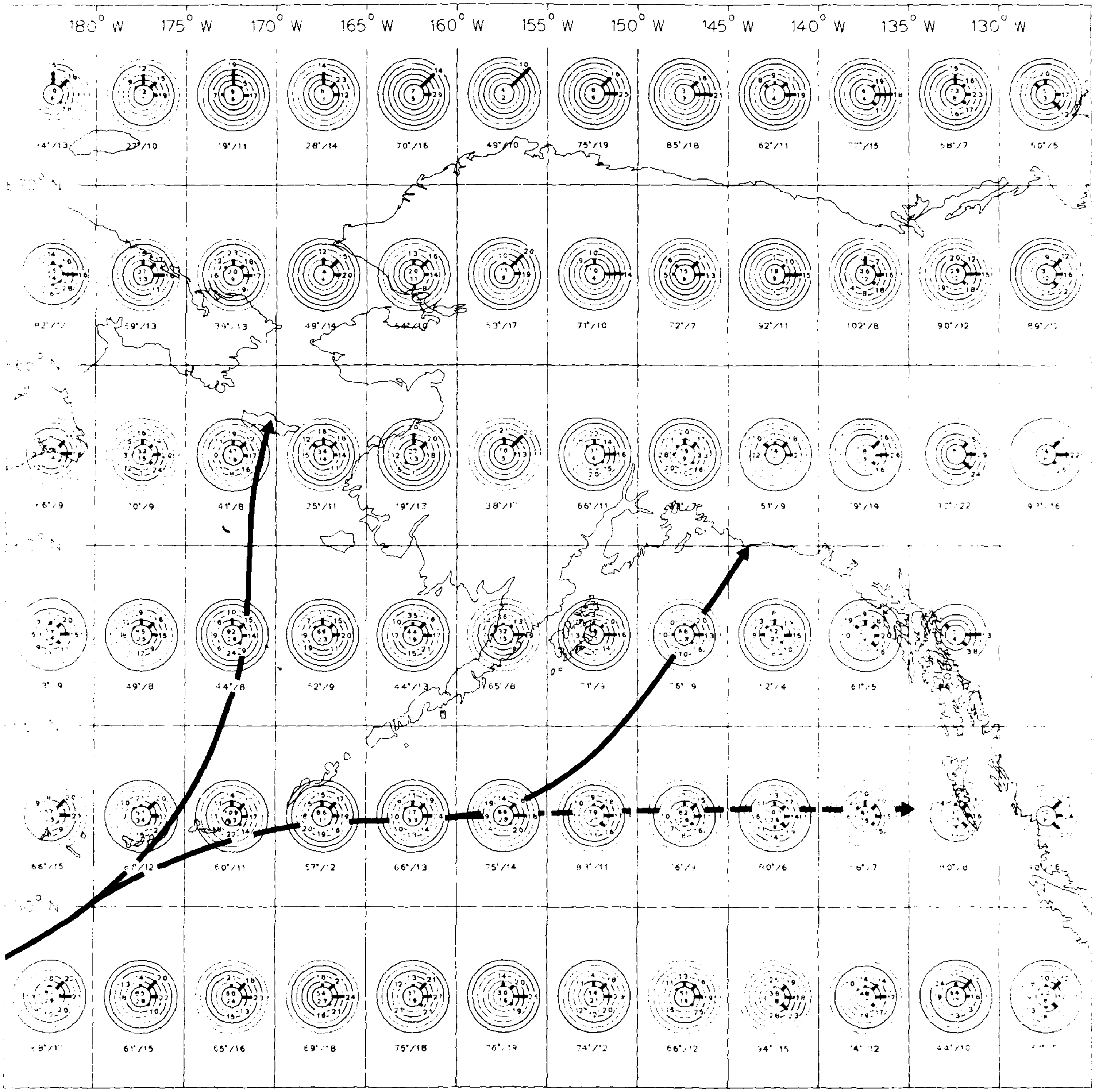


May

22 Low pressure center movement

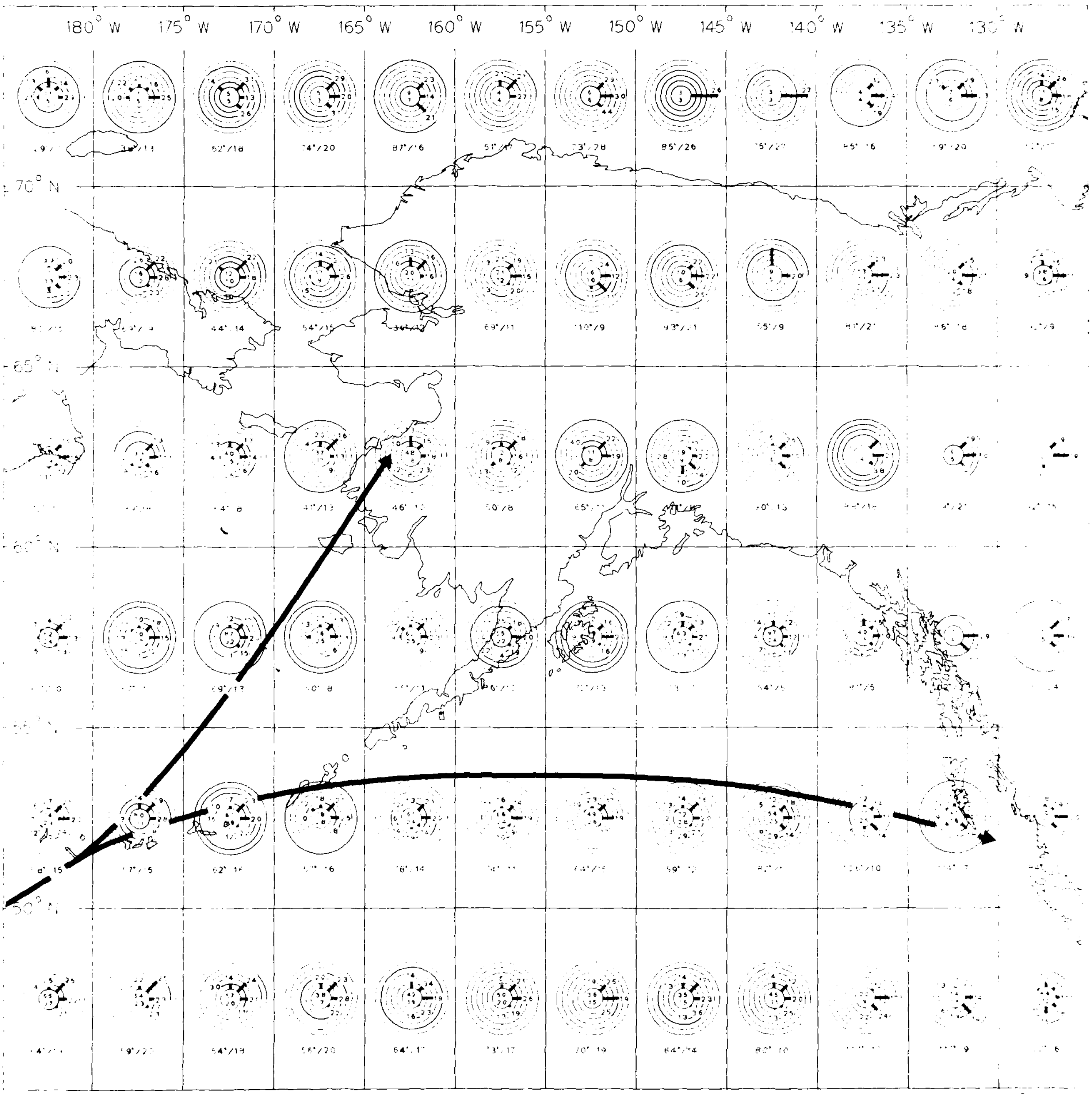


22 Low pressure center movement **June**



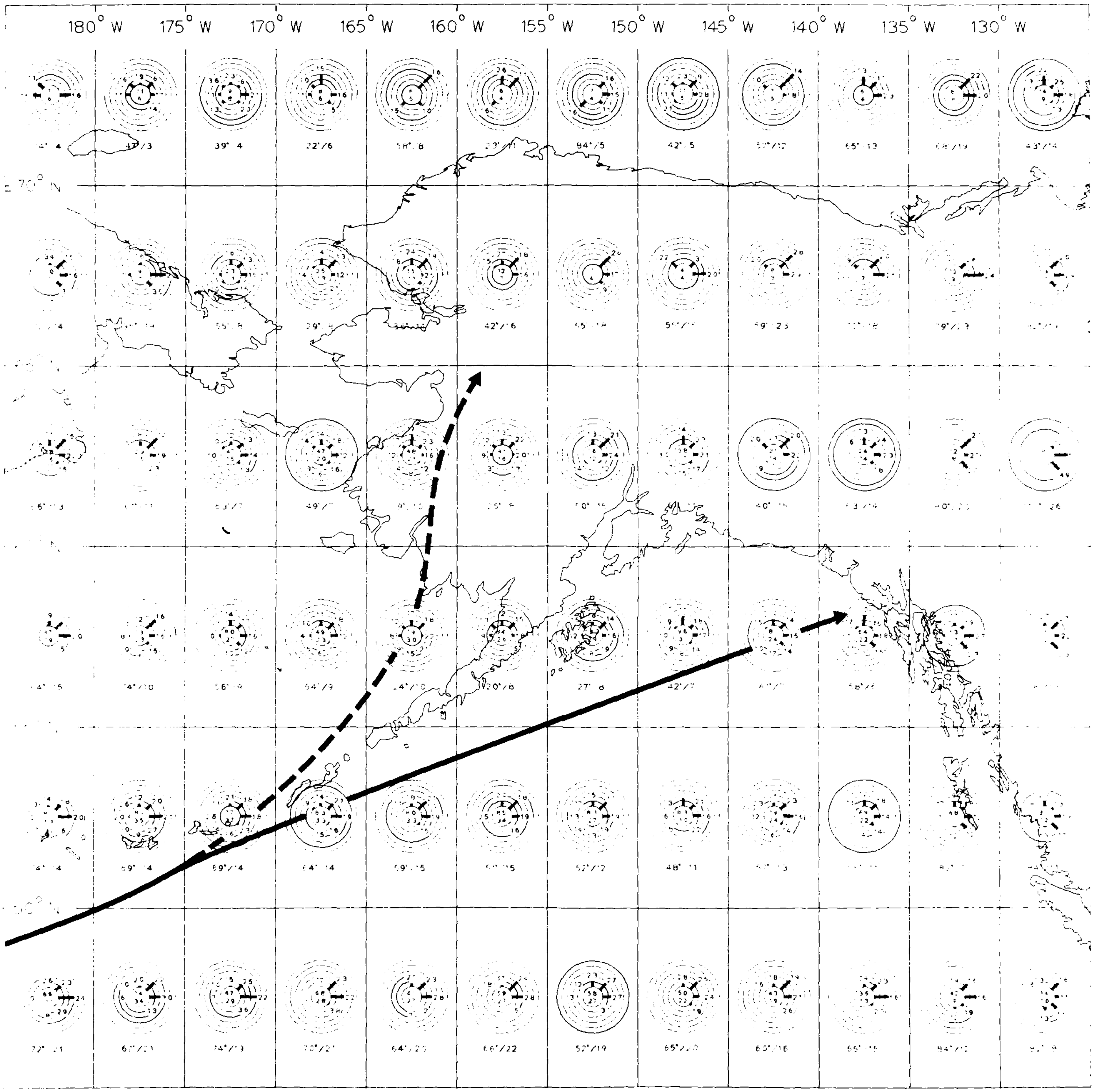
July

22 Low pressure center movement



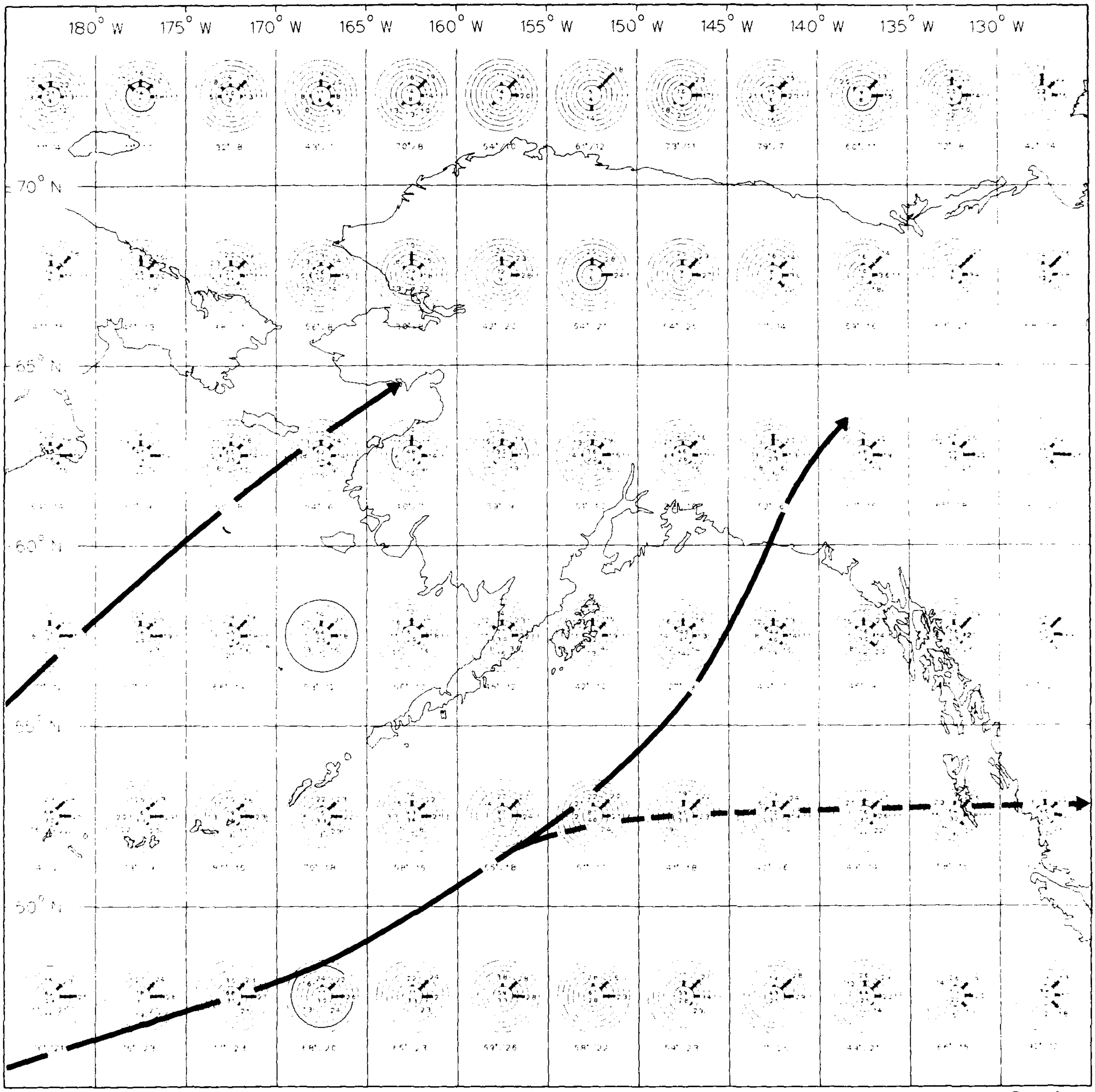
22 Low pressure center movement

Augus

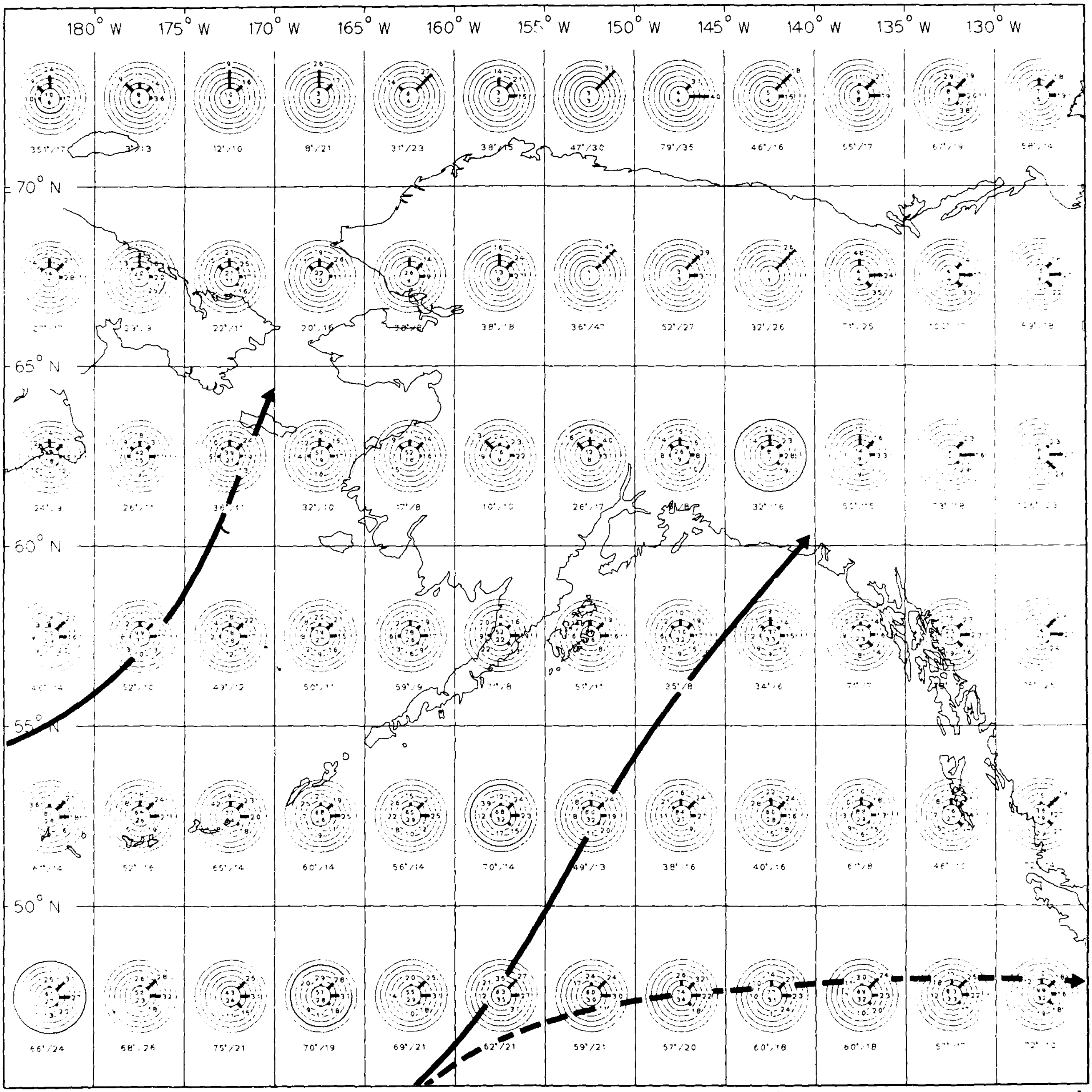


September

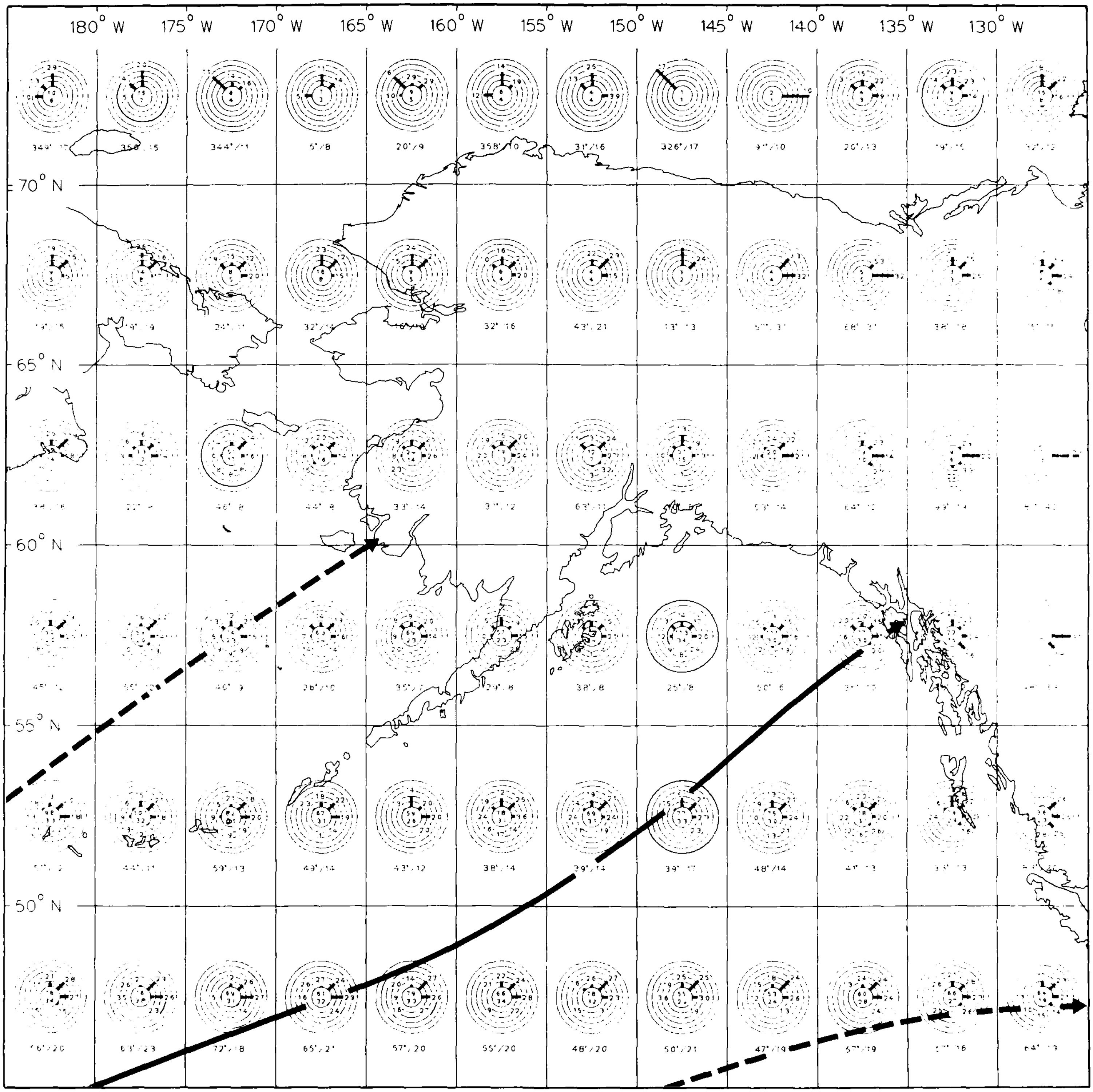
22 Low pressure center movement



22 Low pressure center movement **October**



November **22 Low pressure center movement**



22 Low pressure center movement **December**

Set 23. Annual maximum wind for selected return periods (Refer to introductory text of Section II for additional information.)

Annual Maximum Winds for Selected Return Periods

Values oif the annual maximum sustained wind speeds for selected return periods are presented in the table below for selected coastal stations. These tabular values may be used to construct a graphical analysis of the data similar to the one in Figure 1. The procedure is as follows:

1. Use Fisher-Tippett, Type 1 extreme value probability paper with a natural logarithmic ordinate scale and a probability scaled abscissa. A linear reduced variate scale is also useful in locating intermediate probabilities.

2. Select and plot the annual maximum wind speeds at their corresponding probability values from Table.

3. Draw a straight line connecting those points. This is the line of best fit from which wind speed estimates for intermediate probabilities can be obtained.

4. A one standard error confidence band may be drawn by computing the upper and lowert bound according to Gumbel (1958). The computational procedure is as follows:

   a. $S9 = \sqrt{(1/P-1)/(-Ln(P))}$
   b. $TP = S9 \times A1/\sqrt{N}$, $A1 = 1/\beta$
   c. Upper Bound (P) = Exp(Ln(x(P))) + TP
   d. Lower Bound (P) = Exp(Ln(x(P))) − TP

where S9 = a probability term, TP = standard error at probability P, A1 = scale term $1/\beta$, x [P] is the wind speed at probability [P] in knots, and [N] = sample size. This will give an envelope of the 68-percent confidence band for the estimates.

Graphs similar to Figure 1 have been drawn for each station's annual and monthly values and are available on microfiche from the National Climatic Data Center, Federal Building, Asheville, NC, 28801. Any questions regarding the application of the extreme value model should be addressed to Larry Nicodemus, telephone number (704) 259-0366.

ANNUAL MAXIMUM SUSTAINED WINDS (KNOTS) FOR SELECTED RETURN PERIODS

STATION NAME	RETURN PERIOD (YEARS) 2	5	10	25	50	100	PARAMETERS MODE	BETA	N
OSTROV VRANGELJA, RA	51.7	59.8	65.9	72.4	81.6	89.3	49.3	.1291	24
MYS SHMIDTA, RA	49.5	60.7	69.4	78.9	93.2	105.6	46.4	.1788	25
OSTROV KOLYCHINO, RA	45.0	56.3	65.3	75.3	90.5	103.9	41.9	.1975	19
MYS UELEN, RA	57.5	66.0	72.2	78.8	88.2	96.0	55.0	.1211	25
TIN CITY, AK	49.0	55.7	60.7	65.8	73.1	79.1	47.0	.1130	32
KOTZEBUE, AK	43.0	49.3	53.9	58.7	65.7	71.4	41.2	.1195	41
CAPE LIZBURNE, AK	48.7	55.3	60.2	65.2	72.4	78.3	46.8	.1120	33
POINT LAY, AK	39.7	43.5	46.3	49.0	52.9	56.0	38.6	.0810	29
BARROW, AK	35.2	42.3	47.9	53.9	62.7	70.3	33.1	.1637	38
LONELY, AK	36.5	41.9	45.9	50.0	55.9	60.8	35.0	.1204	28
OLIKTOK, AK	39.1	46.9	52.8	59.2	68.7	76.8	36.9	.1592	28
BARTER, AK	52.1	61.7	69.0	76.8	88.2	97.9	49.3	.1490	37
TUKTOYAKTUK, CN	32.9	36.3	38.8	41.3	44.8	47.6	31.8	.0876	26
CAPE PARRY, CN	37.5	43.4	47.9	52.5	59.3	64.9	35.8	.1293	28
CLINTON POINT, CN	40.1	46.7	51.7	56.9	64.5	70.9	38.2	.1345	10
HOLMAN, CN	48.8	55.9	61.2	66.7	74.6	81.1	46.7	.1203	26
SACHS HARBOUR, CN	39.7	44.4	47.9	51.5	56.5	60.6	38.2	.1003	29
MOULD BAY, CN	37.9	48.5	57.2	66.9	81.9	95.4	35.0	.2179	32

NOTE : SOME OF THE HIGHER RETURN PERIOD VALUES MAY BE UNREALISTIC BECAUSE OF THE SMALL SAMPLE SIZE. THE CONFIDENCE BANDS AT THESE VALUES MAY BE UNUSUALLY WIDE, WHICH INDICATES A HIGH LEVEL OF UNCERTAINTY.

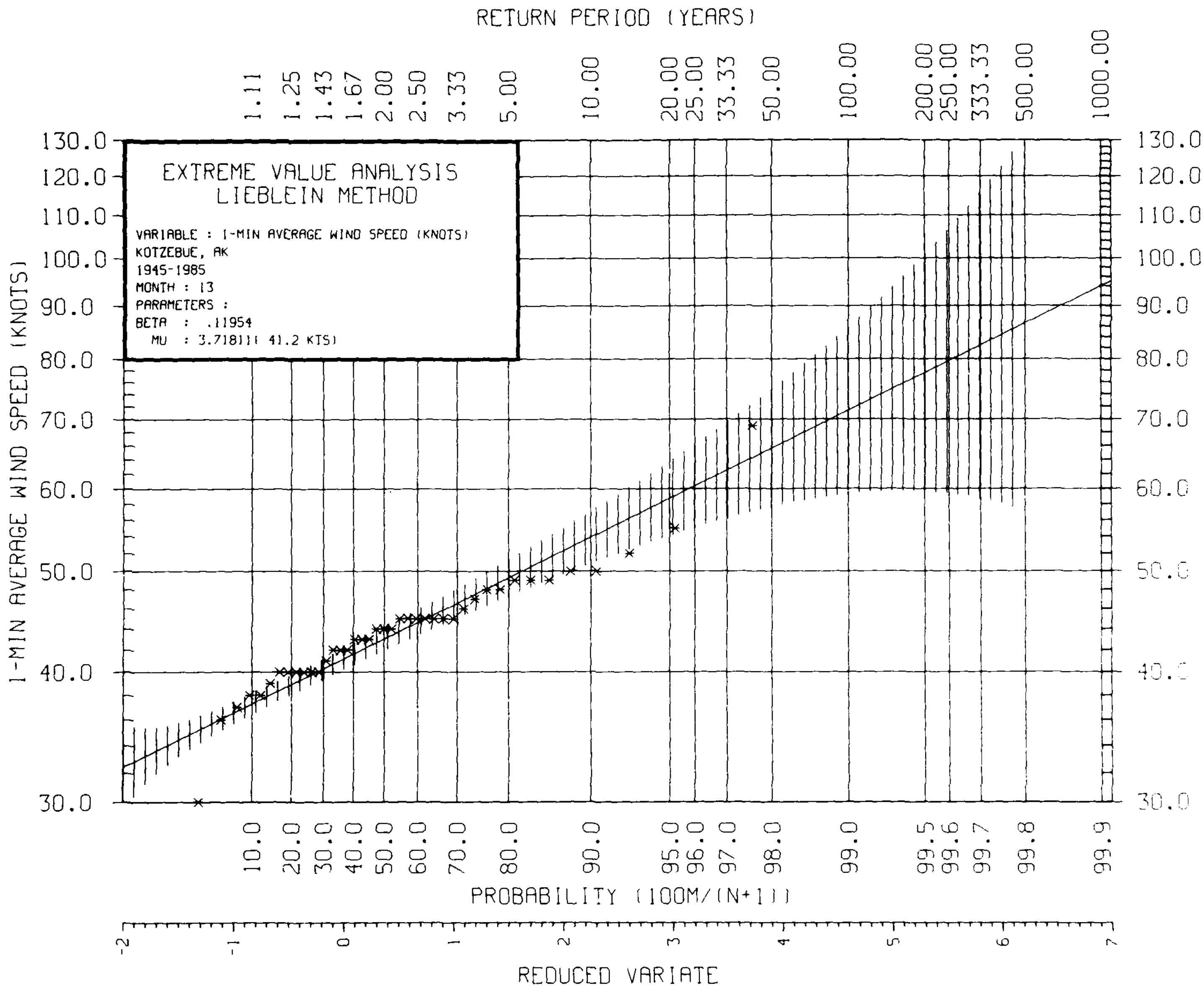


Figure 1. Graphical analysis of annual extreme sustained wind speeds for Kotzebue, AK

References

Aagaard, K. 1979. Current measurements in possible dispersal regions of the Beaufort Sea. Pages 208-231 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators. Vol. 7. USNOAA OCSEAP.

___. 1980. Current measurements in possible dispersal regions of the Beaufort Sea. Pages 29-49 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators. Vol. 6, Transport. USNOAA OCSEAP.

Alaska Dept. of Health & Social Services, Emergency Medical Services Section. 1982. State of Alaska hypothermia and cold water near drowning guidelines. Results of a conference on hypothermia and cold water near drowning, Anchorage, AK, July 11-12, 1981. Juneau, AK. AK/DHSS/PH/82/26. 45 pp.

Alaska, Univ., Arctic Environmental Information & Data Center. 1975. Alaska regional profiles. Arctic region. Office of Governor, Div. of Policy Development and Planning, Juneau, AK. 216 pp.

Arctic Institute of North America. 1974. The Alaskan arctic coast, a background study of available knowledge. Contract report for Alaska District Corps of Engineers. Anchorage, AK. 551 pp.

Arkin, M.A. 1971. Wind chill (equivalent temperatures). U.S. National Oceanic & Atmospheric Administration, Environmental Data Service, Silver Spring, MD. Environmental information summaries C-3. 4 pp.

Atmospheric Environment Service, Environment Canada. 1982. Canadian climate normals, Vol. 2. Temperature 1951-1980. 306 pp.

________. 1982. Canadian climate normals, Vol. 3. Precipitation 1951-1980. 601 pp.

________ 1982. Canadian climate normals, Vol. 5. Wind 1951-1980. 283 pp.

Barnes, P.W., and L.G. Toimil. 1979. Maps showing inner shelf circulation patterns, Beaufort Sea, Alaska. U.S. Geological Survey, Denver, CO. Map MF-1125.

Barry, R.G., P.E. Morhz, and J.C. Rogers. 1979. Fast ice regimes of the Beaufort and Chukchi sea coasts, Alaska. Cold Regions Science and Technology. 1(2):129-152. As cited in LaBelle, et al. 1983.

Borisenkov, E.P., and V.V. Panov. 1972. Basic results and prospects of research of hydrometeorological conditions of shipboard icing, in CRREL draft translation 411, AD A003215, pp. 1-30. As cited in R.D. Brown and T. Agnew. 1985. Evaluation of currently available marine icing models for prediction of icing on ships and offshore structures. Pages 123-132 in T.A. Agnew and V.R. Swail, eds. 1985. Proceedings of the International Workshop on Offshore Winds and Icing, Halifax, Nova Scotia, Oct. 7-11. Atmospheric Environment Service, Downsview, Ontario.

Bourke, R.H., and R.G. Paquette. 1974. Observations on the coastal current of arctic Alaska. Journal of Marine Research. 32(2):195-207.

Brower, W.A., et al. 1977. Climatic atlas of the outer continental shelf waters and coastal regions of Alaska. Arctic Environmental Information & Data Center, University of Alaska-Fairbanks, Anchorage, AK and U.S. National Climatic Data Center, Asheville, NC. 3 vols.

Burns, B.M. 1973. The climate of the Mackenzie Valley-Beaufort Sea, Vol. 1. Canadian Meteorological Service, Toronto, Ontario, Canada. 227 pp.

________. 1974. The climate of the Mackenzie Valley-Beaufort Sea, Vol. 2. Canadian Meteorological Service, Toronto, Ontario, Canada. 239 pp.

Canada Department of Transport, Meteorological Branch. 1967-70. Atlas of climatic maps. 10 charts.

Carleton, A.M. 1980. Polynya development in the Cape Thompson-Point Hope region, Alaska. Arctic and Alpine Research. 12(2):205-214.

Coachman, L.K., and R.B. Tripp. 1970. Currents north of Bering Strait in winter. Limnology and Oceanography. 15(4):625-632.

Coachman, L.K., K. Aagaard, and R.B. Tripp. 1975. Bering Strait: the regional physical oceanography. Univ. of Washington Press, Seattle, WA. 172 pp.

Coachman, L., et al. 1978. Norton Sound/Chukchi Sea oceanographic processes (N-COP). Pages 860-928 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators. Vol. 10, Transport. USNOAA OCSEAP.

Drury, W.D., C. Ramsdell, and J.B. French, Jr. 1981. Ecological studies in the Bering Strait region. Environmental assessment of the Alaskan continental shelf. NOAA/OCSEAP Final Report. Biological Studies. 11:175-487.

Dygas, J.A., and D.C. Burrell. 1976. Wind and current patterns in an arctic coast lagoon. Ocean Engineering. 3:317-327.

Elms, J.D. 1986. Climatology of the oceans - Do transient ships introduce a fair weather bias? To be published by the World Meteorological Organization, Geneva, Switzerland.

Fathauer, T.F. 1978. A forecast procedure for coastal floods in Alaska. U.S. National Weather Service, Regional Headquarters, Anchorage, AK. NOAA Technical Memorandum NWS AR-23. 27 pp.

Gatto, L.W. 1980. Coastal environment, bathymetry, and physical oceanography along the Beaufort, Chukchi, and Bering Seas. Cold Regions Research Engineering Laboratory, U.S. Army Corps of Engineers, Hanover, NH. Special Report 80-5. 357 pp.

Goroch, A.K., T. Brown, and M.J. Vanderhill. 1984. Rain rate climatologies over marine regions. Naval Environmental Predictions Research Facility, Monterey, CA. Technical Report 84-04. 82 pp.

Gumbel, E.J. 1958. Statistics of extremes. Columbia University Press. 371 pp.

Gumbel, E.J., and J. Lieblein. 1954. Some applications of extreme value methods. American Statistician. 8(14):4-7.

Hachmeister, L.E., and J.B. Vinelli. 1983. Physical oceanography. Ch. 7 in Environmental Characterization and Biological Use of Lagoons in the Eastern Beaufort Sea. LGL Report to OCSEAP. Juneau, AK.

Hastings, A.D. 1971. Surface climate of the arctic basin. U.S. Army Engineer Topographic Laboratories, Fort Belvoir, VA. Report ETL-TR-71-5. 96 pp.

Hogben, N., and F.E. Lumb. 1967. Ocean wave statistics. Her Majesty's Stationery Office, London, England. 263 pp.

Hufford, G.L. 1974. On apparent upwelling in the southern Beaufort sea. Journal of Geophysical Research. 79(9):1305-06.

Hufford, G.L., B.O. Thompson, and L.O. Farmer. 1977. Surface currents of the northeast Chukchi Sea. Pages 10-38 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators. Vol. 14, Transport. USNOAA OCSEAP.

Huggett, W.S., et al. 1975. Near bottom currents and offshore tides. Canada Dept. of Environment, Victoria, BC. Beaufort Sea Project. Technical Report 16. 38 pp.

Hunkins, K., and P.A. Kaplin. 1966. Chukchi Sea. Pages 191-196 in P.W. Fairbridge, ed. Encyclopedia of oceanography. Reinhold Publishing Co.

Jorgensen, T.S. 1982. Influence of ice accretion of activity in the northern part of the Norwegian continental shelf. Offshore Technology Testing and Research Group, Trondheim, Norway. Report STF88 F82016. 142 pp.

Klein, W.H. 1957. Principal tracks and mean frequencies of cyclones and anticyclones in the northern hemisphere. U.S. Weather Bureau. Research Paper 40. 60 pp.

Kowalik, Z., and J.B. Matthews. 1982. The M2 tide in the Beaufort and Chukchi seas. Journal of Physical Oceanography. 12:743-746.

Kozo, T.L. 1985. Superstructure icing in the North Chukchi, South Chukchi, and Hope Basin areas. Annual report. Vantuna Research Group, Occidental College, Los Angeles, CA. U.S. National Oceanic & Atmospheric Administration and U.S. Bureau of Land Management, Outer Continental Shelf Environmental Assessment Program. 46 pp.

LaBelle, J.C., et al. 1983. Alaska marine ice atlas. Arctic Environmental Information & Data Center, University of Alaska-Fairbanks, Anchorage, AK. 302 pp.

Leslie, L.D. 1986. Alaska climate summaries. Arctic Environmental Information & Data Center, University of Alaska-Fairbanks, Anchorage, AK. Alaska Climate Center Technical Note 3. 481 pp.

Lewbel, G.S., and B.J. Gallaway. 1984. Transport and fate of spilled oil. Pages 7-29 in J.C. Truett, ed. Proceedings of a Synthesis Meeting: The Barrow Arch Environment and Possible Consequences of Planned Offshore Oil and Gas Development, Girdwood, AK, Oct. 30-Nov. 1, 1983. USNOAA OCSEAP, Anchorage, AK. 229 pp.

Lieblein, J. 1954. A new method of analyzing extreme value data. National Advisory Committee for Aeronautics. Technical Note 3053. 88 pp.

________. 1974a. Efficient methods of extreme value methodology. U.S. Dept. of Commerce, National Bureau of Standards. NBSIR 74-602. 24 pp.

________. 1974b. Note on simplified estimators for type I extreme value distribution. U.S. Dept. of Commerce, National Bureau of Standards. NBSIR 75-637. 15 pp.

Liljestrom, G. 1985. Icing on semisubmersible platforms. Pages 313-328 in T.A. Agnew and V.R. Swail, eds. 1985. Proceedings of the International Workshop on Offshore Winds and Icing, Halifax, Nova Scotia, Oct. 7-11. Atmospheric Environment Service, Downsview, Ontario.

Lissauer, I.M., L.E. Hachmeister, and B.J. Morson. 1984. Atlas of the Beaufort Sea. U.S. Coast Guard Research, Groton, CT. ADA149 545. Report CG-D-33-84. 1 vol.

Matthews, J.B. 1979. Characterization of the nearshore hydrodynamics of an arctic barrier island—lagoon system. Pages 57-97 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators, March 1979. Vol. 8, Transport. USNOAA OCSEAP.

________. 1980. Characterization of the nearshore hydrodynamics of an arctic barrier island—lagoon system. Pages 577-601 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators. Vol. 6, Transport. USNOAA OCSEAP.

________. 1981. Observations of surface and bottom currents in the Beaufort Sea near Prudhoe Bay, Alaska. Journal of Geophysical Research. 86(C7):6653-6660.

________. 1983. Some aspects of circulation along the Alaskan Beaufort Sea coast. Pages 475-497 in H.G. Gade, A. Edwards, and H. Svendsen, eds. Coastal oceanography. NATO Conference Series IV: Marine Sciences. Vol. 11. Plenum Press, New York.

Maxwell, J.B. 1980. The climate of the Canadian arctic islands and adjacent waters, Vol. 1. Atmospheric Environment Service, Environment Canada, Toronto, Ontario, Canada. Climatological Studies 30. 532 pp.

McLellan, H.J. 1965. Elements of physical oceanography. Pergamon Press, London, England. 150 pp.

Mills, Jr., W.J. 1973. Frostbite and hypothermia—current concepts. Alaska Medicine. 15(2):26-47ff.

Minsk, L.D. 1977. Ice accumulation on ocean structures. Cold Regions Research and Engineering Laboratory, U.S. Army Corps of Engineers, Hanover, NH. CRREL Report 77-17. Report for Marathon Oil Company. 46 pp.

________. 1980. Icing on structures. Cold Regions Research and Engineering Laboratory, U.S. Army Corps of Engineers, CRREL Report 80-31. Report for Office of Marine Geology, U.S. Geological Survey. 18 pp.

Mungall, J., and R. Whitaker. 1979. Oceanographic processes in a Beaufort Sea barrier island—lagoon system; numerical modeling and current measurements. Pages 182-284 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators. Vol. 8, Transport. USNOAA OCSEAP.

Murty, T.S. 1984. Storm surges—meteorological ocean tides. Canada Department of Fisheries and Oceans, Ottawa, Canada. Canadian Bulletins of Fisheries and Aquatic Sciences 212. 897 pp.

Nauman, J.W., and R. Tyagi. 1985. Superstructure icing and freezing conditions on offshore drill rigs, Alaska experience and regulatory implications. Pages 57-68 in T.A. Agnew and V.R. Swail, eds. 1985. Proceedings of the International Workshop on Offshore Winds and Icing, Halifax, Nova Scotia, Oct. 7-11. Atmospheric Environment Service, Downsview, Ontario.

Naval Polar Oceanography Center. 1986. U.S. Navy-NOAA joint ice center seasonal outlook western arctic ice 1986. Washington, DC. Report for Navy Oceanography Command. 3 pp.

Norton, D.W., and W.M. Sackinger, eds. 1981. Beaufort Sea (sale 71) synthesis report. Proceedings of a synthesis meeting, Chena Hot Springs, Alaska. April 21-23, 1981. Office of Marine Pollution Administration, U.S. National Oceanic & Atmospheric Administration and U.S. Bureau of Land Management, OCSEAP, Juneau, AK. 252 pp.

O'Rourke, J.C. 1975. Inventory of physical oceanography of the eastern Beaufort Sea. Pages 65-84 in J.C. Reed and J.E. Sater, eds. The coast and shelf of the Beaufort Sea. Proceedings of a Symposium of Beaufort Sea Coast and Shelf Research. Arctic Institute of North America. December 1974.

Overland, J.E., C.H. Pease, and R.W. Preisendorfer. 1985. An algorithm for prediction of vessel icing. Pages 248-256 in T.A. Agnew and V.R. Swail, eds. 1985. Proceedings of the International Workshop on Offshore Winds and Icing, Halifax, Nova Scotia, Oct. 7-11. Atmospheric Environment Service, Downsview, Ontario.

Paquette, R.G., and R.H. Bourke. 1979. Temperature fine structure near sea-ice margin of the Chukchi Sea: Journal of Geophysical Research. 84(C3):1155.

Pease, C.H., and A.L. Comiskey. 1985. Vessel icing in Alaskan waters—1979 to 1984 data set. Pacific Marine Environmental Laboratory, U.S. National Oceanic & Atmospheric Administration, Seattle, WA. NOAA Data Report ERL PMEL-14. 16 pp.

Peters, E., ed. 1982. Mountaineering: the freedom of the hills. 4th ed. The Mountaineers, Seattle, WA. 550 pp.

Quayle, R.G. 1974. A climatic comparison of ocean weather station and transient ship records. Mariners Weather Log. 18(5):307-331.

________. 1980. Climatic comparisons of estimated and measured winds from ships. Journal of Applied Meteorology. 19(2):142-156.

Rao, M.S.V., W.V. Abbott, III, and J.S. Theon. 1976. Satellite-derived global oceanic rainfall atlas (1973 and 1974). National Aeronautics & Space Administration, Washington, DC. NASA SP-410. 186 pp.

Reimnitz, E., and D.K. Maurer. 1979. Effects of storm surges on the Beaufort Sea coast, northern, Alaska. Arctic. 32(4):329-344.

Robinson, M.K. 1976. Atlas of North Pacific Ocean monthly mean temperatures and mean salinities of the surface layer. U.S. Naval Oceanographic Office. Reference Publication 2. 190 pp.

Salo, S.A., J.D. Schumacher, and L.K. Coachman. 1983. Winter currents on the eastern Bering Sea shelf. Pacific Marine Environmental Laboratory, U.S. National Oceanic & Atmospheric Administration. Seattle, WA. NOAA Technical Memorandum ERL PMEL-45. 53 pp.

Stirling, I., and H. Cleaton, eds. 1981. Polynyas in the Canadian arctic. Canadian Wildlife Service. Occasional Paper No. 45. 73 pp. As cited in LaBelle, et al. 1983.

Stringer, W.J., S.A. Barrett, and L.K. Schreurs. 1980. Nearshore ice conditions and hazards in the Beaufort, Chukchi, and Bering seas. Geophysical Institute, University of Alaska-Fairbanks, Fairbanks, AK. UAGR No. 274. 161 pp.

Thomas, D.R. 1983. Potential oil and ice trajectories in the Beaufort Sea. Flow Industries, Inc., Kent, WA. R&D Div Report 252.

Truett, J.C., ed. 1984. The Barrow Arch environment and possible consequences of planned offshore oil and gas development. Proceedings of a synthesis meeting. Girdwood, Alaska, 30 Oct.-1 Nov., 1983. U.S. National Oceanic & Atmospheric Administration and U.S. Bureau of Land Management OCSEAP. Anchorage, AK. 229 pp.

U.S. Bureau of Land Management. Alaska Outer Continental Shelf Office. 1979. Proposed federal/state oil and gas lease sale, Beaufort Sea: final environmental impact statement. Anchorage, AK. 3 vols.

U.S. National Oceanic & Atmospheric Administration. 1974. Weather service observing handbook no. 1, marine surface observations. National Weather Service. Silver Spring, MD. 113 pp.

________. 1982. Ship's code card. National Weather Service, Washington, DC. Form WS TA B-O-7. 6 pp.

________. 1986. Quality control programs for marine data (revised). Unpublished. National Climatic Data Center, Asheville, NC.

________. 1986. Tape data 1129, marine data users reference, 1970-current. Unpublished. National Climatic Data Center, Asheville, NC. 36 pp.

________. 1986. Tape data 1170, surface marine data, 1854-1969. Unpublished. National Climatic Data Center. Asheville, N.C. 33 pp.

U.S. National Oceanic & Atmospheric Administration, National Climatic Data Center. 1982-1986. Storm data. Asheville, NC.

________. 1985-1986. Climatological data. Alaska. Asheville, NC.

U.S. National Oceanic & Atmospheric Administration, National Ocean Service. 1985. Tide tables 1986. High and low water predictions. West coast of North and South America including the Hawaiian Islands. Rockville, MD. 234 pp.

U.S. National Oceanic & Atmospheric Administration, National Ocean Survey. 1983. Arctic coast of Alaska. Washington, DC. Nautical Chart Catalog No. 3, Panels M, N. (1:1,587,870 at 70°00').

U.S. National Oceanic & Atmospheric Administration, National Weather Service. 1976. Effective temperature (wind chill index). *Silver Spring, MD. Technical* Procedures Bulletin 165. 6 pp.

U.S. National Oceanic & Atmospheric Administration, and U.S. Air Force. 1971. Global atlas of relative cloud cover 1967-70. Washington, DC. 237 pp.

U.S. Naval Observatory. 1945. Tables of sunrise, sunset, and twilight, supplement to the American ephemeris-1946. Washington, DC. 195 pp.

U.S. Navy. 1977. Marine climatic atlas of the world, Vol. 2, North Pacific Ocean. Naval Weather Service Detachment, Asheville, NC. NAVAIR 50-IC-529. 358 pp.

________. 1981. Marine climatic atlas of the world, Vol. 9, world-wide means and standard deviations. Naval Oceanography Command Detachment, Asheville, NC. NAVAIR 50-IC-65. 169 pp.

________. 1985. Hindcast spectral ocean wave model climatic atlas: North Pacific Ocean. Naval Oceanography Command Detachment, Asheville, NC. NAVAIR 50-IC-539. 328 pp.

________. 1986. Sea ice climatic atlas: Vol. 3, arctic west. Naval Oceanography Command Detachment, Asheville, NC. NAVAIR 50-IC-542. 147 pp.

U.S. Navy, National Oceanic & Atmospheric Administration Joint Ice Center. 1981. Ice observation handbook. Washington, DC. 87 pp.

Weller, G., D. Norton, and T. Johnson, eds. 1977. Beaufort Sea synthesis *report*. Draft report. Proceedings of a synthesis meeting of Outer Continental Shelf Environmental Assessment Program and other investigators in northern Alaska, Barrow, AK. University of Alaska, Fairbanks, AK. Arctic Project Bulletin. Special *Bulletin* 15.

Whittaker, L.M. 1982. Atlas of northern hemisphere extratropical cyclone activity, 1958-1977. University of Wisconsin, Madison, WI. 65 pp.

Wilson, D.E., et al. 1981. Numerical trajectory modeling and associated field measurements in the Beaufort Sea and Chukchi Sea nearshore areas. Pages 299-378 in Environmental assessment of the Alaskan continental shelf. Annual reports of principal investigators. Vol. 5, Transport. *USNOAA OCSEAP.*

Wilson, E.E. 1976. Hypothermia and cold water survival. U.S. Dept. of Commerce. National Oceanic & Atmospheric Administration. Mariners Weather Log. 20(3):136-138.

Wise, J.L., and A.L. Comiskey. 1980. Superstructure icing in Alaskan waters. Pacific Marine Environmental Laboratory, U.S. National Oceanic & Atmospheric Administration, Seattle, WA. NOAA Special Report. 30 pp.

Wise, J.L., A.L. Comiskey, and R. Becker, Jr. 1981. Storm surge climatology and forecasting in Alaska. Alaska Council on Science and Technology. 57 pp.

Wiseman, Jr., W.J., and L.J. Rouse, Jr. 1980. A coastal jet in the Chukchi Sea. Arctic. 33(1):21-29.

Wiseman, Jr., W.J., et al. 1974. Characteristics of nearshore oceanographic environment of arctic Alaska. Pages 49-64 in J.C. Reed and J.E. Sater, eds. The Coast and Shelf of the Beaufort Sea. Proceedings of a Symposium on Beaufort Sea Coast and Shelf Research. San Francisco, CA, January 7-9, 1974. Arctic Institute of North America, Arlington, VA.

World Meteorological Organization. 1979. Climatic atlas of North and Central America. Geneva, Switzerland. 39 pp.

________. 1981. Climatic atlas of Asia. Geneva, Switzerland. 31 pp.

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